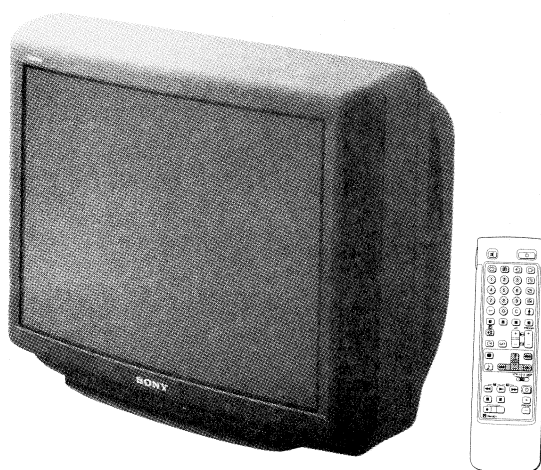


# SERVICE MANUAL

# AE-2B CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-S3431A	RM-831	Italian	SCC-G59F-A	KV-S3433E	RM-831	Spanish	SCC-G56F-A
KV-S3431B	RM-831	French	SCC-G57F-A	KV-S3431K	RM-831	OIRT	SCC-G73E-A
KV-S3431D	RM-831	AEP	SCC-G45E-A	KV-S3432U	RM-831	UK	SCC-G55G-A



TRINITRON® COLOR TV  
**SONY®**

ITEM MODEL	Television System	Stereo System	Channel Coverage	Color System
Italian	B/G/H, D/K	GERMAN Stereo	ITALIA VHF:A-H2 (C) UHF: 21-69 PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
French	B/G/H, D/K L, I	GERMAN Stereo	L VHF:F02-F10 UHF:F21-F60 CABLE:B-Q B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 I UHF:B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
AEP	B/G/H, D/K	GERMAN Stereo	PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
Spanish	B/G/H, D/K	GERMAN/NICAM Stereo	PAL B/G VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
OIRT	B/G/H, D/K	GERMAN Stereo	B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
UK	I	NICAM Stereo	UHF : B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)

MODEL	Italian	French	AEP	Spanish	OIRT	UK
Power Consumption	131W	147W	147W	150W	147W	205W

## SPECIFICATIONS

**Picture Tube** Super Trinitron  
Approx. 86 cm (34 inches)  
(Approx. 80 cm picture measured diagonally)  
110° -deflection

### Input/Output Terminals

#### [REAR]

- Ⓔ-1 21-pin Euro connector (CENELEC standard)
  - inputs for audio and video signals
  - inputs for RGB
  - outputs of TV video and audio signals
- Ⓔ-2/Ⓔ-3 2 21-pin Euro connector
  - inputs for audio and video signals
  - inputs for S video
  - outputs for audio and video signals (selectable)
- Ⓔ-4 Audio outputs (variable) - phono jacks

#### [FRONT]

- Ⓔ-5 Video input - phono jack
- Ⓔ-6 Audio inputs - phono jacks
- Ⓔ-7 S video input 4-pin DIN
- Ⓔ-8 Headphone jacks : stereo minijack

Sound output 2 x 12W (RMS)  
2 x 30W (Music)

Power requirements 220 - 240V  
Dimensions Approx. 813x648x596 mm  
Weight Approx. 79kg  
Supplied accessories RM-831 Remote Commander (2)  
IEC designation R6 battery (1)  
Other features NICAM, FASTEXT.

#### [RM-831]


Remote control system infrared control  
Power requirements 1.5V dc  
1 battery IEC designation R6 (size AA)  
Dimensions Approx. 65x225x21 mm (w/h/d)  
Weight Approx. 157g (Not including batteries)

**Design and specifications are subject to change without notice.**



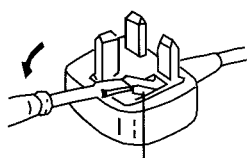
Model name Item	KV-S3431A	KV-S3431B	KV-S3431D	KV-S3433E	KV-S3431K	KV-S3432U
Pal Comb	OFF	OFF	OFF	OFF	OFF	OFF
PIP	OFF	OFF	OFF	OFF	OFF	OFF
RGB Priority	ON	ON	OFF	OFF	OFF	OFF
Woofer Box	OFF	OFF	OFF	OFF	OFF	OFF
DSP	ON	ON	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON	ON
Scart 4	OFF	OFF	OFF	OFF	OFF	OFF
Dyn. Convergence	OFF	OFF	OFF	OFF	OFF	OFF
Projector	OFF	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON
Norm B/G	ON	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	OFF	ON
Norm D/K	ON	ON	ON	ON	ON	OFF
Norm AUS	OFF	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF	OFF	OFF
DSP	OFF	OFF	OFF	OFF	OFF	OFF
Language Preset	Italiano	Francais	Deutsch	None	OIRT	English

## WARNING ( KV-S3432U only )

The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the  mark.

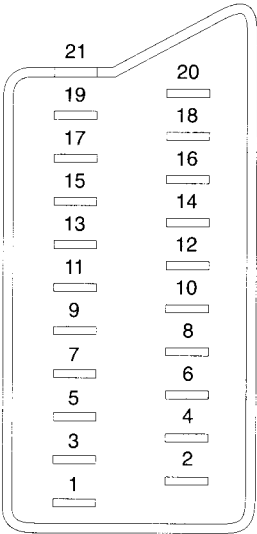
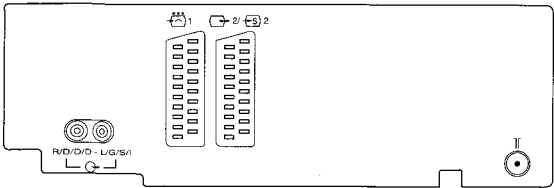
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME. IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.

When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.  
Open the fuse compartment with the screwdriver blade and replace the fuse.

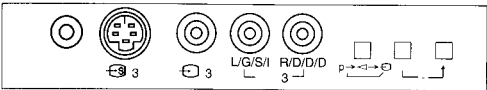
21 pin connector ( 1 2 3 4 )



Pin No.	1	2	4	Signal	Signal level
1	○	○	○	Audio output B (right)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
2	○	○	○	Audio input B (right)	Standard level : 0.5V rms Output impedance : More than 10kohm*
3	○	○	○	Audio output A (left)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
4	○	○	○	Ground (audio)	
5	○	○	○	Ground (blue)	
6	○	○	○	Audio input A (left)	Standard level : 0.5V rms Output impedance : More than 10kohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More than 10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (green)	
10	○	○	○	Open	
11	○	●	●	Green	Green signal : 0.7 ± 3dB, 75 ohms, positive
12	○	○	○	Open	
13	○	○	○	Ground (red)	
14	○	○	○	Ground(blanking)	
15	○	-	-	Red input (S signal) chroma input	0.7 ± 3dB, 75 ohms, positive 0.3 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Lowstate (0 - 0.4V) Input impedance : 75ohms
17	○	○	○	Ground(video output)	
18	○	○	○	Ground(video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync: 0.3V(-3/+10dB)
20	○	-	-	Video input	1V ± 3dB, 75ohms, positive sync: 0.3V(-3/+10dB)
21	○	○	○	Common ground (plug, shield)	

○ Connected      ● Not Connected (open)      \* at 20Hz - 20kHz

Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm , positive Sync. 0.3V -3/+10 dB
4	C (S signal) input	0.3V ± 3dB 75 ohm , positive Sync.



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### CAUTION

**SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP.**

### WARNING !!

AN ISOLATING TRANSFORMER SHOULD BE USED DURING ANY SERVICE WORK TO AVOID POSSIBLE SHOCK HAZARD, DUE TO A LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

### SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARKED  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLIMENTS PUBLISHED BY SONY.


### ATTENTION

**APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.**

### ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

### ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ !!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT, NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

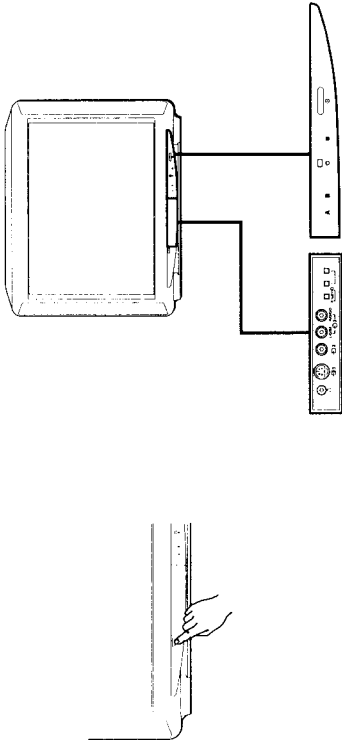
# SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

## 1-1. OVERVIEW

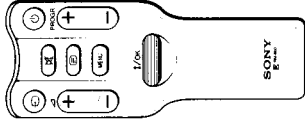
This section briefly describes the buttons and controls on the TV set and on the Remote Commander. For more information, refer to the pages given next to each description.

### TV set-front

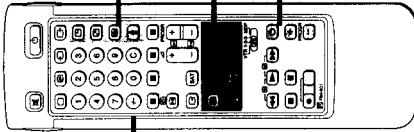
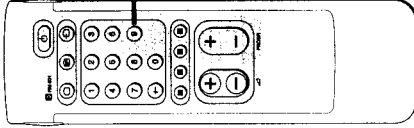


Symbol	Name	Refer to page
⏻	Main power switch	13
⏻	Standby indicator	13
A-B	Stereo A/B indicators	15
🎧	Headphones jack	22
📺, 📺, 📺	Input jacks (S video/video/audio)	22
📺, 📺, 📺	Function selector (Programme/volume/input)	13
📺, 📺, 📺	Adjustment buttons for function selector	13

### Scroll Commander RM-860



### Remote commander RM-831



**Note**  
The SAT button does not operate with this TV.

Simple side

Full-Function side

### TV/Teletext operation

Symbol	Name	Refer to page
🔇	Muting on/off button	14
⏻	Standby button	13
📺	TV power on/TV mode selector button	13
📺	Teletext button	14
📺	Input mode selector	14
📺	Output mode selector	23
1,2,3,4,5,6,7,8,9 and 0	Number buttons	13
-/--	Double-digit entering button	13
C	Direct channel entering button	10
📺	Volume control button	13
PROGR +/-	Programme selectors	13
📺	Teletext page access buttons	18
📺	Picture adjustment button	15
📺	Sound adjustment button	15
📺	On-screen display button	14
📺	Teletext hold button	18
📺	Time display button	14
📺	Fastext buttons	18

### PIP (Picture-in-Picture) operation

Symbol	Name	Refer to page
📺	PIP on/off button	17
📺	PIP source selector	17
📺	Swap button	17
📺	PIP position changing button	17

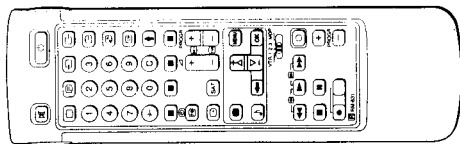
### Menu operation

Symbol	Name	Refer to page
MENU	Menu on/off button	7
Δ+/▽-	Select buttons	7
OK	OK (confirming) button	7
←	Back button	7
↑/OK	Scroll Commander: Roller to select/confirm menu functions	7

### Video operation

Symbol	Name	Refer to page
VTR 1/2/3, MDP	Video equipment selector	24
📺, 📺, 📺	Video equipment operation buttons	24
PROGR +/-		

## 1-2. STEP 3 – TUNING IN TO TV STATIONS



Once you have set up the TV, you can choose the language of the menu. Then you should preset the channels (up to 100 channels) by choosing either the automatic or manual method. The automatic method is easier if you want to preset all receivable channels at once. Use the manual method if you only have a few channels and want to preset channels one by one. The manual method is also convenient for allocating programme numbers to various video input sources.

### Before you begin

- Check that the Full-Function side of the Remote Commander is visible.
- Locate Menu operation buttons on the Remote Commander. They are shaded in the illustration at the left.

### Easy Menu operation using the Scroll Commander

In addition to your double-sided Remote Commander your TV set is supplied with an extra Remote Commander. This Scroll Commander works with a roller for convenient, fast-access operation of the Menu functions. Move the roller upwards to move the cursor upwards, move the roller downwards to move the cursor downwards, press the roller to confirm a selection. The other buttons on this commander have the same function as the respective buttons on the double-sided Remote Commander.

## 1 Choose a language

- 1 Depress on the TV. The TV will switch on. If the standby indicator on the TV is lit, press or a number button on the Remote Commander. Press the MENU button.
- 2 The LANGUAGE menu appears. (See Fig. 1.)



- 3 Select the language you want with or and press OK.

## 2 Display the Menu

- Press the button. The main menu appears. (See Fig. 2.)
- Now, choose one of the following methods  
or  
»Preset Channels Automatically«

**To go back to main menu**  
Keep pressing .

**To go back to the normal TV picture**  
Press MENU.

**Note on the DEMO function**  
If you choose »Demo« on the main menu, you can see a sequential demonstration on the menu functions. Press MENU to stop.

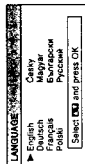


Fig. 1.

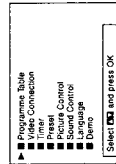


Fig. 2.

## 3 Preset channels automatically

- 1 Select »Preset« with or and press OK. The PRESET menu appears. (See Fig. 3.)
- 2 Select »Auto Programme« with or and press OK. The AUTO PROGRAMME menu appears. (See Fig. 4.)
- 3 Press OK. Select if necessary the TV broadcast system (B/G for Western European or D/K for Eastern European countries) with or and press OK. The first element of the »PROG«-number will be highlighted.
- 4 Select the programme (number button) from which you want to start presetting. Select the first element of the double-digit number with or or the number buttons (e.g. For »04«, select »0« here) and press OK. The second element of »PROG« will be highlighted.
- 5 Select the second element of the double-digit number with or or the number buttons (e.g. For »04«, select »4« here) (See Fig. 5.) and press OK.
- 6 Press OK. The automatic channel presetting starts. When presetting is finished, the preset menu reappears. All available channels are now stored on successive programme positions.

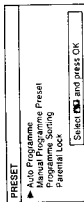


Fig. 3.

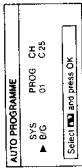


Fig. 4.



Fig. 5.

## 3 Preset channels manually

- 1 Select »Preset« with or and press OK. The PRESET menu appears. (See Fig. 6.)
- 2 Select »Manual Programme Preset« with or and press OK. The MANUAL PROGRAMME PRESET menu appears. (See Fig. 7.)

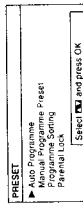


Fig. 6.

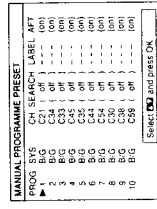
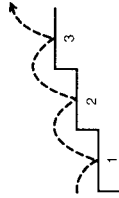
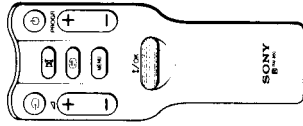


Fig. 7.

# 1-3. ADDITIONAL PRESETTING FUNCTIONS



- 3 Using  $\Delta$  + or  $\nabla$  -, select the programme position (number button) to which you want to preset a channel, and press OK.
- 4 Select if necessary, a video input source (EXT) with  $\Delta$  + or  $\nabla$  -. Then press OK. The CH position will be highlighted. (See Fig. 8.)
- 5 Using  $\Delta$  + or  $\nabla$  -, select C (to preset a regular channel), S (to preset a cable channel) or F (to tune in by frequency) and press OK.

**To tune in a channel by frequency**  
After selecting F in step 6, enter three digits using the number buttons.

The first element of the «CH» number will be highlighted. If you have selected EXT in step 4, select the video input source with  $\Delta$  + or  $\nabla$  -. (See Fig. 9.)

There are two ways to preset channels. If you know the channel number, go to step »7-Manual«, or

if you don't know the channel number, go to step »7-Search«.

## 7 Manual

- a Select the first element of the «CH» number with  $\Delta$  + or  $\nabla$  - or the number buttons and press OK.  
The second element of the «CH» number will be highlighted.
- b Select the second element of the number with  $\Delta$  + or  $\nabla$  - or the number buttons.  
The selected number appears. (See Fig. 10.)
- c Press OK.  
The «SEARCH» position is highlighted and the selected channel is now stored. (See Fig. 11.)
- d Press OK until the cursor appears by the next programme position.
- e Repeat steps 3 to 7 to preset other channels.

**If you have made a mistake**  
Press  $\leftarrow$  to go back to the previous position.  
**To go back to main menu**  
Keep pressing  $\leftarrow$ .  
**To go back to the normal TV picture**  
Press MENU.



Fig. 8.



Fig. 9.



Fig. 10.

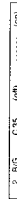


Fig. 11.



Fig. 12.

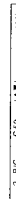
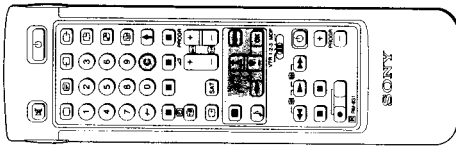


Fig. 13.

- 7 **Search**
  - a Press OK repeatedly until the colour of the SEARCH position changes.
  - b Start searching for the channel with  $\Delta$  + (up) or  $\nabla$  - (down).  
The CH position changes colour. (See Fig. 12.)  
The CH number starts counting up or downwards. When a channel is found, it stops. (See Fig. 13.)
  - c Press OK if you want to store this channel. If not, press  $\Delta$  + or  $\nabla$  - to continue channel searching.
  - d Press OK until the cursor appears by the next programme position.
  - e Repeat steps 3 to 7 to preset other channels.

**If you have made a mistake**  
Press  $\leftarrow$  to go back to the previous position.  
**To go back to main menu**  
Keep pressing  $\leftarrow$ .  
**To go back to the normal TV picture**  
Press MENU.

## PROGRAMME SORTING



This section shows you additional presetting functions such as sorting or skipping programme positions, captioning a station name, manual fine-tuning, and using the parental lock.

### Before you begin

- Check that the Full Function side of the Remote Commander is visible.
- Locate the Menu operation buttons.

## Sorting Programme Positions

With this function, you can sort the programme positions to a preferable order.

- 1 Press MENU to display the main menu.
- 2 Select «Preset» with  $\Delta$  + or  $\nabla$  - and press OK.  
The PRESET menu appears.
- 3 Select «Programme Sorting» with  $\Delta$  + or  $\nabla$  - and press OK.  
The PROGRAMME SORTING menu appears. (See Fig. 14.)
- 4 Using  $\Delta$  + or  $\nabla$  -, select the programme position which you want to move to another and press OK.  
The colour of the selected position changes. (See Fig. 15.)
- 5 Using  $\Delta$  + or  $\nabla$  -, select the programme position to which you want to move the channel of the programme position selected in step 4 and press OK. Now the programme positions have been sorted. (See Fig. 16.)
- 6 Repeat steps 4 and 5 to sort other programme positions.

PROG	CH	LABEL	PROG	CH	LABEL
1	C15	BBC1	9	C03	---
2	C14	BBC2	10	C03	---
3	---	---	11	C03	---
4	---	---	12	C03	---
5	---	---	13	C03	---
6	C08	C4	---	---	---
7	C15	BBC1	---	---	---
8	C15	BBC1	---	---	---

Fig. 14.

1	C15	BBC1	15	---	---
---	-----	------	----	-----	-----

Fig. 15.

PROG	CH	LABEL	PROG	CH	LABEL
1	C15	BBC1	9	C03	---
2	C14	BBC2	11	C03	---
3	---	---	12	C03	---
4	---	---	13	C03	---
5	---	---	14	---	---
6	C08	C4	---	---	---
7	C15	BBC1	---	---	---
8	C15	BBC1	---	---	---

Fig. 16.

## Tuning in a Channel Temporarily

You can tune in a channel temporarily, even when it has not been preset. Use the buttons on the Full-Function side of the Remote Commander.

- 1 Press C on the Remote Commander. For cable channels, press C twice.  
The indication «C» («S» for cable channels) appears on the screen.
- 2 Enter the double-digit channel number using the number buttons (e.g. for channel 4, first press 0, then 4).  
However, the channel will not be stored.

## Skipping Programme Positions

You can skip unused programme positions when selecting programmes with the PROG +/- buttons. However, the skipped programmes may still be called up when you use the number buttons.

- 1 Press MENU to display the main menu.
- 2 Select »Preset« with  $\Delta$  + or  $\nabla$  – and press OK. The PRESET menu appears.
- 3 Select »Manual Programme Preset« with  $\Delta$  + or  $\nabla$  – and press OK. The MANUAL PROGRAMME PRESET menu appears. (See Fig. 17.)
- 4 Using  $\Delta$  + or  $\nabla$  –, select the programme position which you want to skip and press OK. The »SYS« position changes colour.
- 5 Press  $\Delta$  + or  $\nabla$  – until »--« appears in the SYSTEM position. (See Fig. 18.)
- 6 Press OK. (See Fig. 19.) When you select programmes using the PROG +/- buttons, the programme position will be skipped.
- 7 Repeat steps 4 to 6 to skip other programme positions.



Fig. 17.



Fig. 18.



Fig. 19.

## Captioning a Station Name

Programme names are usually automatically taken from Teletext if available. You can also »name« a channel or an input video source using up to five characters (letters or numbers) to be displayed on the TV screen (e.g. RTL). Using this function, you can easily identify which channel or video source you are watching.

- 1 Press MENU to display the main menu.
- 2 Select »Preset« with  $\Delta$  + or  $\nabla$  – and press OK. The PRESET menu appears.
- 3 Select »Manual Programme Preset« with  $\Delta$  + or  $\nabla$  – and press OK. The MANUAL PROGRAMME PRESET menu appears. (See Fig. 20.)
- 4 Using  $\Delta$  + or  $\nabla$  –, select the programme position you want to caption and press OK repeatedly until the first element of the LABEL position is highlighted.
- 5 Select a letter or number with  $\Delta$  + or  $\nabla$  – and press OK. The next element will be highlighted. Select other characters in the same way, if you want to leave an element blank, select – and press OK. (See Fig. 21.)
- 6 After selecting all the characters, press OK repeatedly until the cursor appears by the next programme position (at the left margin). Now the caption you chose is stored. (See Fig. 22.)
- 7 Repeat steps 5 and 6 to caption names for other channels.

**If you have made a mistake**  
Press  $\leftarrow$  to go back to the previous position.

**To go back to main menu**  
Keep pressing  $\leftarrow$ .

**To go back to the normal TV picture**  
Press MENU.

## Manual Fine-Tuning

Normally, the AFT (automatic fine-tuning) is already operating. However, if the picture is distorted, you can use the manual fine tuning function to obtain better picture reception.

- 1 Press MENU to display the main menu.
- 2 Select »Preset« with  $\Delta$  + or  $\nabla$  – and press OK. The PRESET menu appears.
- 3 Select »Manual Programme Preset« with  $\Delta$  + or  $\nabla$  – and press OK. The MANUAL PROGRAMME PRESET menu appears. (See Fig. 23.)
- 4 Using  $\Delta$  + or  $\nabla$  –, select the programme position corresponding to the channel which you want to manually fine-tune, and press OK repeatedly until the AFT position changes colour.
- 5 Fine-tune the channel with  $\Delta$  + or  $\nabla$  – so that you get the best TV reception. As you press the cursor buttons, the frequency changes from –15 to +15. (See Fig. 24.)
- 6 After fine tuning, press OK. The cursor appears beside the next programme position (at the left margin). (See Fig. 25.) Now the fine-tuned level is stored.
- 7 Repeat steps 4 to 6 to fine-tune other channels.

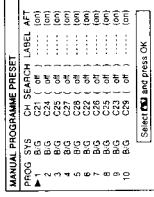


Fig. 23.



Fig. 24.



Fig. 25.

## Parental Lock

You can prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

- 1 Press MENU to display the main menu.
  - 2 Select »Preset« with  $\Delta$  + or  $\nabla$  – and press OK. The PRESET menu appears.
  - 3 Select »Parental Lock« with  $\Delta$  + or  $\nabla$  – and press OK. The PARENTAL LOCK menu appears. (See Fig. 26.)
  - 4 Using  $\Delta$  + or  $\nabla$  –, select the programme position you want to block and press OK. The CH and LABEL change colour indicating that this programme is now blocked. (See Fig. 27.)
  - 5 Repeat step 4 to block other programme positions.
- Cancelling blocking**  
On the PARENTAL LOCK menu, select the programme position you want to unblock with  $\Delta$  + or  $\nabla$  –.
- 1 Press OK. The CH and LABEL change colour to normal colour indicating that the blocking has been cancelled.

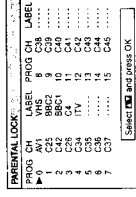


Fig. 26.

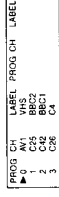
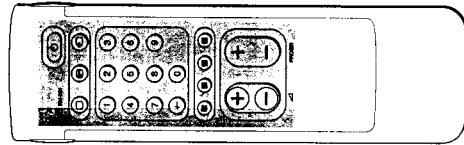


Fig. 27.

**If you try to select a programme that has been blocked**  
The message »LOCKED« appears on the blank TV screen.

# Operating Instructions

## 1-4. WATCHING THE TV



If no picture appears when you depress  $\odot$  on the TV and if the standby indicator on the TV is lit, the TV is in standby mode. Press  $\odot$  or one of the number buttons to switch it on.

This section explains the basic functions you use while watching TV. Most of the operations can be done using the simple side of the Remote Commander.

### Switching the TV on and off

#### Switching on

Depress  $\odot$  on the TV.

#### Switching off temporarily

Press  $\odot$  on the Remote Commander. The TV enters standby mode and the standby indicator on the front of the TV lights up.

#### To switch on again

Press  $\odot$ , PROG + or  $\ominus$ , or one of the number buttons on the Remote Commander.

#### Switching off completely

Depress  $\odot$  on the TV.

### Selecting TV Programmes

Press PROG + or press number buttons.

#### To select a double-digit number

Press  $\swarrow$  or  $\searrow$ , then the numbers.

For example, if you want to choose 23, press  $\swarrow$  or  $\searrow$ , 2 and 3.

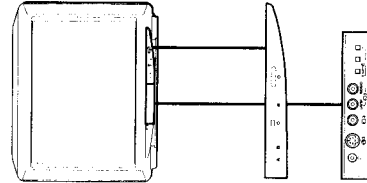
### Adjusting the Volume

Press  $\Delta$  or  $\nabla$ .

### Operating the TV Using the Buttons on the TV

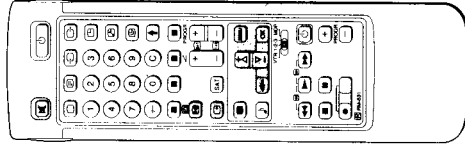
With the buttons on the TV, you can select programmes, adjust the volume, and select video input sources.

- Press  $\text{P} \rightarrow \Delta \rightarrow \odot$  button repeatedly until the programme **channel number** (or **volume**), or **AV** (for video input picture) appears. **Then adjust with the  $\Delta$  buttons.**
- Press  $\swarrow$  or  $\searrow$  buttons to switch on the TV from the standby mode.
- Press  $\swarrow$  or  $\searrow$  simultaneously to reset picture and sound controls to the factory preset level (RESET function).



For details of the teletext operation, refer to page 18.

For details of the video input picture, refer to page 23.



To make the Programme Table disappear. Press MENU.

## Watching Teletext or Video Input

### Watching teletext

- Press  $\text{P}$  to view the teletext.
- Press three number buttons to select a page.
- Press one of the coloured buttons for fastest operation.
- Press  $\text{P}$  (PAGE +) or  $\text{P}$  (PAGE -) for the next or preceding page.
- To go back to the normal TV picture, press  $\odot$ .

### Watching a video input picture

Press  $\Delta$  repeatedly until the desired video input appears. To go back to the normal TV picture, press  $\odot$ .

## More Convenient Functions

Use the Full-Function side of the Remote Commander.

### Displaying the on screen indications

- Press  $\text{P}$  once to display all the indications. They will disappear after some seconds.
- Press  $\text{P}$  twice to have the programme number and label stay on screen. Press twice again to make indications disappear.

### Muting the sound

- Press  $\text{M}$ .
- To resume normal sound, press  $\text{M}$  again.

### Displaying the time

- Press  $\text{T}$ . This function is available only when teletext is broadcast.
- To make the time display disappear, press  $\text{T}$  again.

### Displaying of the Programme Table

Press OK. A Programme Table will be displayed on the right side of the TV screen (See Fig. 28.)

### Selecting of TV programmes

Press PROG + or select the desired programme position using  $\Delta$  or  $\nabla$  and press OK.

1	ARD
2	SAT
3	CG2
4	RTL
5	RTL
6	SWF
7	SWF
8	AV1
9	AV1
10	MTV

Fig. 28.



## 1-5. ADJUSTING AND SETTING THE TV USING THE MENU

### Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste. In addition, you can set the resolution to obtain a higher quality picture or change the aspect ratio of the TV display for wide screen effect. You can also select dual sound (bilingual) programmes when available, adjust the sound for listening with the headphones (Ⓜ) or individually adjust and store the volume level of each channel (Volume off-set). Also you have the possibility to adjust the sound to your individual taste using the Graphic Equalizer and special Sound effects.

- 1 Press **Ⓜ** (for picture) or **Ⓜ** (for sound) on the Remote Commander.

or

Press MENU and select «Picture Control» or «Sound Control», then press OK.  
The PICTURE CONTROL or SOUND CONTROL menu appears. (See Fig. 29. or Fig. 30.)

- 2 Using  $\Delta$  + or  $\nabla$  -, select the item you want to adjust and press OK. The selected item changes colour. (See Fig. 31.)

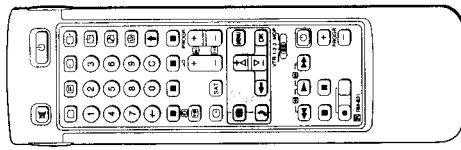
- 3 Adjust the setting with  $\Delta$  + or  $\nabla$  - and press OK.  
The cursor appears beside the next item (at the left margin). (See Fig. 32.)

- 4 Repeat steps 2 and 3 to adjust other items.

#### Effect of each control

PICTURE CONTROL	Effect
Contrast	Less ——— More
Brightness	Darker ——— Brighter
Colour	Less ——— More
Hue	Greenish ——— Reddish
Sharpness	Softer ——— Sharper
Reset	Resets picture to the factory preset levels
Format	4 : 3 Normal 16 : 9 Wide screen effect
Resolution	off: Normal High: Obtain a higher picture quality
<b>SOUND CONTROL</b>	
Graphic Equalizer	(See page 16 for more information)
Balance	More left ——— More right
Digital Surround	off: Normal Choice between special sound effects: Dome, Hall, Arena, Simulated (gives width to a monaural source)
Dual Sound	A: channel 1 B: channel 2 stereo mono The selected mode of The A-B indicator on the TV lights up - 7 Less 0 More + 7
Volume offset	Less ——— More
Headphones:	A: channel 1 B: channel 2 stereo mono PIP (if PIP is switched on you can select the PIP sound for the headphones)
Ⓜ Volume	
Ⓜ Dual Sound	

#### PICTURE CONTROL SOUND CONTROL



**If you have made a mistake**  
Press **Ⓜ** to go back to the previous position.

**To go back to the main menu**  
Keep pressing **Ⓜ**.

**To go back to the normal TV picture**  
Press MENU.

**Note:**  
HUE is only available for NTSC colour system and RESOLUTION does not work for SECAM colour system.

**Note on LINE OUT**  
The audio level and the dual sound mode output from the Ⓜ jack on the rear correspond to the Headphone VOLUME and DUAL SOUND settings.

**When watching video input picture**  
You can select DUAL SOUND to change the sound.

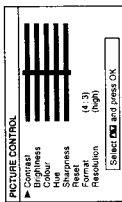
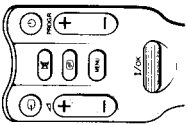


Fig. 29.

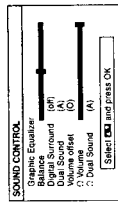


Fig. 30.



Fig. 31.



Fig. 32.

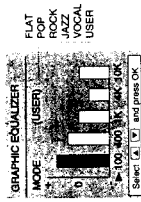


Fig. 33.

**Graphic Equalizer**  
Using this function you can individually adjust the sound by cutting and boosting selected frequencies. You can also select between the following modes:  
Flat → Pop → Rock → Jazz → Vocal → User

1. Select «Sound control» in the Main Menu, then select «Graphic equalizer» using  $\Delta$  + or  $\nabla$  -, and press OK.

2. Press OK. The colour of «Mode» changes. (See Fig. 33.) Select the desired mode with  $\Delta$  + or  $\nabla$  -, then press OK.

3. If you want to modify a mode, select the desired bar of a frequency band using  $\Delta$  + or  $\nabla$  - and press OK. The selected bar changes colour. Using  $\Delta$  + or  $\nabla$  - adjust the level of frequency and press OK. In this way you can adjust all 5 graphic bars.

4. Press MENU to return to the normal TV mode.

### Using the Programme Table

On this table, you can see which channel is preset to which programme position. You can also select programmes using this table.

From the main menu, select «Programme Table» with  $\Delta$  + or  $\nabla$  - and press OK.

The PROGRAMME TABLE menu appears. (See Fig. 34.)

To scroll to higher programme numbers, press  $\Delta$  + or  $\nabla$  -.

To select a programme using this menu

Select the programme number with  $\Delta$  + or  $\nabla$  - and press OK. The selected programme appears.

PROG	CH	LABEL	PROG	CH	LABEL
1	C24	.....	11	C24	.....
2	C24	.....	12	C24	.....
3	C24	.....	13	C24	.....
4	C27	.....	14	C24	.....
5	C23	.....	15	C24	.....
6	C23	.....	16	C24	.....
7	C32	.....	17	C24	.....
8	C32	.....	18	C24	.....
9	C38	.....	19	C24	.....
10	C29	.....	20	C24	.....

Fig. 34.

### Using the Sleep Timer

You can select a time period after which the TV automatically switches into standby mode.

- 1 From the main menu, select «Timer» with  $\Delta$  + or  $\nabla$  - and press OK.

The TIMER menu appears. (See Fig. 35.)

- 2 Press OK.

The time period option changes colour.

- 3 Select the time period with  $\Delta$  + or  $\nabla$  -.  
The time period (in minutes) changes as follows:  
10 → 20 → 30 → 40 → 50 → 60 → 70 → 80 → 90  
1 ——— OFF

- 4 After selecting the time period, press OK.  
The cursor moves back to the left margin and the timer starts counting.  
One minute before the TV switches into standby mode, a message is displayed on the screen.

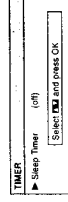
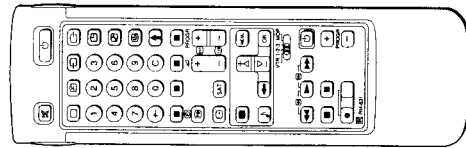


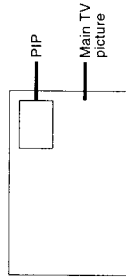
Fig. 35.

## 1-6. PIP (PICTURE-IN-PICTURE)



**Note**  
RGB input source cannot be displayed in PIP.

With this function you can display a "PIP screen" (small picture) within the main TV picture. In this way you can watch or monitor the video output from any connected equipment (for example from a VTR) while watching TV or vice versa. For information about connection of other equipment, refer to page 22.



### Switching PIP on and off

Press **C**.  
The PIP screen will be displayed. The PIP picture will come from the source chosen when the TV was last used.  
To switch PIP off  
Press **C** again.

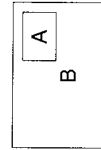
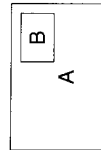
### Selecting a PIP source

Press **1**.  
The symbol **1** will be displayed at the bottom, left-hand corner of the screen.  
Press **Δ** repeatedly until the desired source is indicated (e.g. TV, AV1, AV2, YC2, AV3, YC3, AV4, YC4).

**Note**  
If no video source has been connected, the PIP picture will be noisy.

### Swapping screens

Press **C**.  
The main screen will switch the picture with the PIP screen.



**Note**

If a TV programme is on the PIP screen and a video source on the main picture, and you want to change channels, first press **1** and then the programme buttons or **PROGR +/-**.

### Changing the position of the PIP

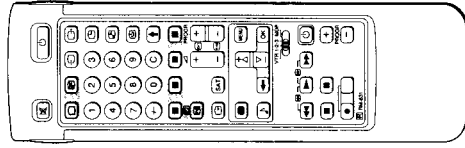
Press **Δ** repeatedly to change the position of the PIP screen within the main screen. There are four different positions available.

### Displaying of PIP within Teletext

Press **C** while teletext is switched on.

The PIP screen will be displayed on the right side of the TV screen, the reduced teletext page will be displayed on the left side.  
Press **C** again to make the PIP screen disappear.

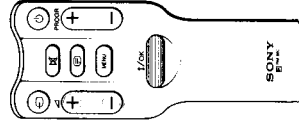
## 1-7. TELETEXT



**Note**  
Teletext errors may occur if the broadcasting signals are weak.

**With the simple side of the Remote Commander**

You can switch teletext on and off, operate Fastext, and directly select page numbers.



**Note**  
Fastext operation is only possible, if the TV station broadcasts Fastext signals.

TV stations broadcast an information service called Teletext via the TV channels. Teletext service allows you to receive various information pages such as weather reports or news at any time you want. For advanced teletext operation, use the buttons on the Full-Function side of the Remote Commander.

## Direct Access Functions

### Switching Teletext on and off

1 Select the TV channel which carries the teletext broadcast you want to watch.

2 Press **Δ** to switch on teletext.  
A teletext page will be displayed (usually the index page). If there is no teletext broadcast, "No text available" is displayed on the information line of the screen.

### To switch teletext off

Press **C**.

### Selecting a teletext page

#### With direct page selection

Use the number buttons to input the three digits of the chosen page number.  
If you have made a mistake, type in any three digits. Then re-enter the correct page number.

#### With page-catching

1 Select a teletext page with a page overview (e.g. index page).  
2 Press OK. "Page catching" will be displayed on the information line. The last digit if the first displayed page number flashes. Using **Δ** or **∇**, select the desired page and press OK. The requested page will appear in a few seconds.  
3 Press **Δ** to resume normal teletext reception.

#### Accessing next or preceding page

Press **Δ** (PAGE +) or **∇** (PAGE -).

The next or preceding page appears.

### Superimposing the teletext display on the TV programme

Press **Δ** once in teletext mode or twice in TV mode.

Press **Δ** again to resume normal teletext reception.

### Preventing a teletext page from being updated

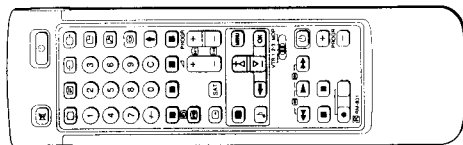
Press **Δ** (HOLD). The HOLD symbol "H" is displayed on the information line.

Press **Δ** to resume normal teletext reception.

### Using Fastext

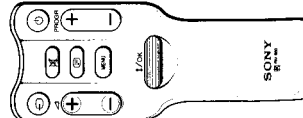
With Fastext you can access pages with one key stroke. When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the Remote Commander.

Press the corresponding coloured button on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed after some seconds.



**Note**  
Some of the features may not be available depending on the Teletext service.

**Note**  
If you press OK again while a teletext page will appear on the left side of the TV screen.



## Using the Teletext Menu

This TV is provided with a menu-guided teletext system. When teletext is switched in, you can use the menu buttons to operate the teletext menu. Select the teletext menu functions in the following way:

- 1 Press MENU. The menu will be superimposed on the teletext display. (See Fig. 36.)
- 2 Using  $\Delta$  + or  $\nabla$  -, select the teletext function you want and press OK. (See Fig. 37.)

### USER PAGES/PRESET USER PAGES

See page 21 for information about presetting and operating the user pages.

### INDEX

The index will give you an overview of the contents of the teletext and the page numbers.

### DUAL PAGE MODE

After having selected the function two succeeding teletext pages will be displayed next to each other on the TV screen.

### Accessing next or preceding page

Press PROG +/-.

### Page Catching

Press OK. Page Catching is now active on the left teletext page (See also page 18).  
While you select a page number on the left page using  $\Delta$  + or  $\nabla$  -, the corresponding teletext page will be displayed on the right side of the TV screen.

### To cancel the function:

Press  $\leftarrow$ .

### TOP/BOTTOM/FULL

For convenient reading of a teletext page, you can enlarge the teletext display with the ability to scroll up and down. After having selected the function, an information line TOP/BOTTOM/FULL will be displayed. (See Fig. 38.)

Press  $\Delta$  + for "Top" to enlarge the upper half. Keep pressing  $\nabla$  - for "Bottom" to enlarge the lower one. Press OK for "Full" to resume the normal size.  
Press  $\Rightarrow$  to resume normal teletext reception.

### TEXT CLEAR

After having selected the function, you can watch a TV programme while waiting for a requested teletext page to be displayed. (The symbol changes colour). (See Fig. 39.)  
Press  $\Rightarrow$  to view the captured page.

### SUBTITLES

Your teletext service will inform you if a TV programme is subtitled. After having selected the function the subtitles will be displayed.

### REVEAL

Sometimes pages contain concealed information, such as answers to a quiz. The reveal option lets you disclose the information. After having selected the function, an information line "REVEAL ON/OFF" will be displayed. (See Fig. 40.)  
Using  $\Delta$  + or  $\nabla$  -, select ON to reveal the information or OFF to conceal it again.  
Press  $\Rightarrow$  to resume normal teletext reception.

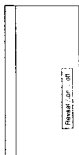


Fig. 40.

### TIME PAGE

Your teletext service will inform you, if a time coded page is available. You may have a page (e.g. an alarm page) displayed at a certain time.

- 1 Press OK. An information window will be displayed at the bottom of the page. Using  $\Delta$  + or  $\nabla$  - select ON and press OK.
- 2 To select the desired page, enter three digits for the page number (e.g. 301) using the number buttons.
- 3 To select the desired time, enter four digits for the desired time (e.g. 1800) using the number buttons. Press MENU.  
The selected time is displayed at the top of the information window. At the requested time, the page will be displayed.

Press  $\Rightarrow$  to resume normal teletext mode.

### SUBPAGE

You may want to select a particular teletext page from several subpages which are rotated automatically. After having selected the function, an information line will be displayed.  
To select the desired subpage, enter four digits using PROG +/-. or the number buttons. (e.g. enter 0002 for the second page of a sequence).

### REVEAL

Sometimes pages contain concealed information, such as answers to a quiz. The reveal option lets you disclose the information. After having selected the function, an information line "REVEAL ON/OFF" will be displayed. (See Fig. 40.)

Using  $\Delta$  + or  $\nabla$  -, select ON to reveal the information or OFF to conceal it again.  
Press  $\Rightarrow$  to resume normal teletext reception.

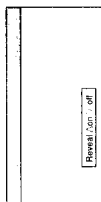


Fig. 40.

### TIME PAGE

Your teletext service will inform you, if a time coded page is available. You may have a page (e.g. an alarm page) displayed at a certain time.

- 1 Press OK. An information window will be displayed at the bottom of the page. Using  $\Delta$  + or  $\nabla$  - select ON and press OK.
- 2 To select the desired page, enter three digits for the page number (e.g. 301) using the number buttons.
- 3 To select the desired time, enter four digits for the desired time (e.g. 1800) using the number buttons. Press MENU.  
The selected time is displayed at the top in the left-handed corner. At the requested time, the page will be displayed.

Press  $\Rightarrow$  to resume normal teletext mode.

### SUBPAGE

You may want to select a particular teletext page from several subpages which are rotated automatically. After having selected the function, an information line will be displayed.

To select the desired subpage, enter four digits using PROG +/-. or the number buttons. (e.g. enter 0002 for the second page of a sequence).

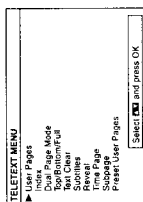


Fig. 36.

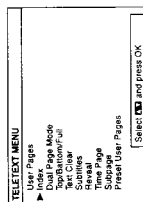


Fig. 37.

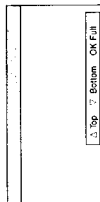


Fig. 38.



Fig. 39.

## 1-8. CONNECTING AND OPERATING OPTIONAL EQUIPMENT

### Connecting Optional Equipment

You can connect optional audio-video equipment to this TV such as VTRs, video disc players, and stereo systems.

**To connect a VTR using the "I" terminal**

Connect the "I" terminal output of the VTR to the aerial terminal "I" of the TV.

We recommend that you tune in the video signal to programme channels manually. For details see "Preset channels manually" on page 8.

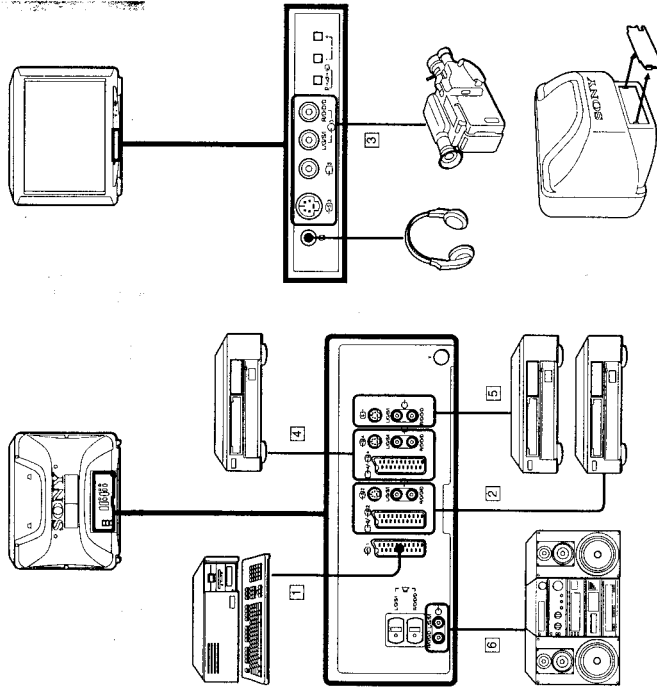
**If the picture or the sound is distorted**  
Move the VTR away from the TV.

**Note:**  
After having connected all optional equipment to the TV, attach the supplied cover onto the rear panel. (See illustration at the right)

#### S video input (Y/C)

Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals. Separating the Y and C signals prevents them from interfering with one another, and therefore improves picture quality especially during fast picture changes. This TV is equipped with 3 S Video input jacks through which these separated signals can be input directly.

**When connecting a monaural VTR**  
Connect the white "C" jack to both the TV and VTR.



Acceptable input signal	Available output signal
1 Normal audio/video and RGB signal	Video/audio from TV tuner
2 Normal audio/video and S video signal	Video/audio from selected source
3 Normal audio/video and S video signal	No outputs
4 Normal audio/video and S video signal	Video/audio displayed on TV screen (monitor out)
5 No inputs	S video/audio signal displayed on TV screen (monitor out)
6 No inputs	Audio signal (variable)

### Selecting input and output

This section explains how to view the video input picture (of the video source connected to your TV), and how to select the output signal using direct access buttons or the menu system.

#### Selecting input

Press **↵** repeatedly to select the input source.  
The symbol of the selected input source will appear.

To go back to the normal TV picture

Press **□**.

#### Input modes

Symbol	Input signal
↵ 1	Audio/video input through the ↵ 1 connector
↵ 2	RGB input through the ↵ 1 connector
↵ 2	Audio/video input through the ↵ 2/↵ 2 connector
↵ 2	S video input through the ↵ 2/↵ 2 or ↵ 2 connector
↵ 3	Audio/video input through ↵ 3 and ↵ 3 on the front
↵ 3	S video input through the ↵ 3 connectors on the front (4-pin connector)
↵ 4	Audio/video input through the ↵ 4/↵ 4 connector
↵ 4	S video input through the ↵ 4/↵ 4 or ↵ 4 connector (4-pin connector)

You can also select the input mode using the **P** → **↵** and **↵** buttons on the TV.  
In this case, first select **↵**, and then press **↵** buttons to select the input.

#### Selecting the output

The ↵ 2/↵ 2 connector outputs the source input from the other connectors.

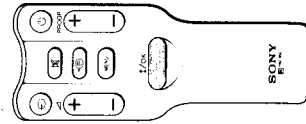
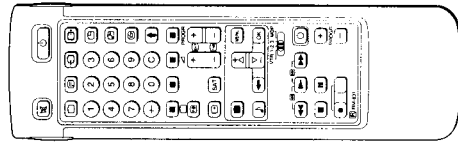
Press **↵** repeatedly to select the output.

The symbol of the selected output source appears.

#### Output modes

Symbol	↵ 2/↵ 2 connector outputs
1 ↵	The audio/video signal from the ↵ 1 connector
2 ↵	The audio/video signal from the ↵ 2/↵ 2 connector
2 ↵	The audio/S video signal from the ↵ 2/↵ 2 connector
3 ↵	The audio/video signal from the ↵ 3 and ↵ 3 connectors
3 ↵	The audio/S video signal from the ↵ 3 and ↵ 3 connectors
4 ↵	The audio/video signal from the ↵ 4/↵ 4 connector
4 ↵	The audio/S video signal from the ↵ 4/↵ 4 connector
TV ↵	The audio/video signal from the TV aerial terminal

**Selecting input with the PROG. and number buttons**  
You can preset video input sources to the programme positions so that you can select them with PROG. +/– or number buttons. For details, see "Preset channels manually" on page 8.



## 1-9. FOR YOUR INFORMATION

### Checking and selecting the input and output sources using the menu

You can display the menu to see which input sources are selected for the TV screen and PIP screen, and which output source is selected. You can also select them on the menu display.

- 1 Select «Video Connection» with  $\Delta$  + or  $\nabla$  - and press OK. The VIDEO CONNECTION menu appears. (See Fig. 43). You can see which source is selected for the TV and PIP input, and for the output. If you want to select the input and output on this menu, go on to the next step.
- 2 Select TV screen (input source for the TV screen), PIP (input source for the PIP screen), or Output (output source) with  $\Delta$  + or  $\nabla$  - and press OK. One of the source items changes colour. (See Fig. 44.)
- 3 Select the desired source with  $\Delta$  + or  $\nabla$  - (See Fig. 45.) For details about each source, see the table on page 23.
- 4 Press OK. The selected source is confirmed, and the cursor appears. (See Fig. 46.)
- 5 Repeat steps 2 to 4 to select the source for other inputs or outputs.

### Remote Control of Other Sony Equipment

You can use the TV Remote Commander to control other remote-controlled equipment. The buttons for video operation have been factory-set to control most of Sony video equipment, such as: Beta, 8mm or VHS VTRs or video disc players.

#### Tuning the Remote Commander to Sony equipment

- 1 Set the VTR 1/2/3 MDP selector according to the equipment you want to control:
  - VTR 1: Beta or ED Beta VTR
  - VTR 2: 8mm VTR
  - VTR 3: VHS VTR
  - MDP: Video disc player
- 2 Use the buttons indicated in the illustration to operate the additional equipment. If your video equipment is furnished with a COMMAND MODE selector set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander. If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.

**When recording**  
When you use the (record) button, make sure that the button and the one to the right of it simultaneously.

Here are some simple solutions to problems which may affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	<ul style="list-style-type: none"> <li>Plug the TV in.</li> <li>Press <math>\odot</math> on the TV. (If <math>\odot</math> indicator is on, press <math>\square</math> or a programme number on the Remote Commander)</li> <li>Check the aerial connection.</li> <li>Check if the selected video source is on.</li> <li>Turn the TV off for 3 or 4 seconds and then turn it on again using <math>\odot</math>.</li> <li>Press <math>\blacksquare</math> to enter the PICTURE CONTROL menu and adjust «Brightness», «Contrast» and «Colour».</li> <li>Press <math>\odot</math> repeatedly to select <math>\ominus</math>.</li> </ul>
Poor or no picture (screen is dark), but good sound	<ul style="list-style-type: none"> <li>Press <math>\blacksquare</math> to enter the PICTURE CONTROL menu and adjust «Brightness», «Contrast» and «Colour».</li> <li>Press <math>\odot</math> repeatedly to select <math>\ominus</math>.</li> </ul>
Poor picture quality when watching a RGB video source	<ul style="list-style-type: none"> <li>Press <math>\Delta</math> +.</li> <li>If <math>\otimes</math> is displayed on the screen, press <math>\otimes</math>.</li> </ul>
Good picture but no sound	<ul style="list-style-type: none"> <li>Press <math>\Delta</math> +.</li> <li>If <math>\otimes</math> is displayed on the screen, press <math>\otimes</math>.</li> </ul>
No colour for colour programmes	<ul style="list-style-type: none"> <li>Press <math>\blacksquare</math> to enter the PICTURE CONTROL menu, select «Reset», then press OK.</li> </ul>
Remote Commander does not function	<ul style="list-style-type: none"> <li>Replace battery.</li> </ul>

If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

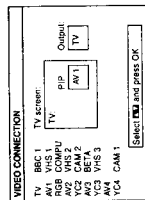


Fig. 43

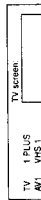


Fig. 44



Fig. 45

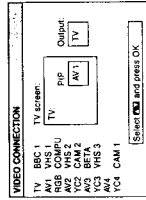
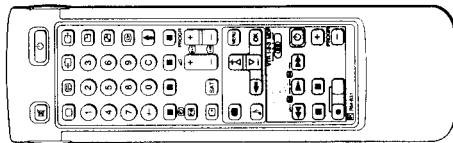
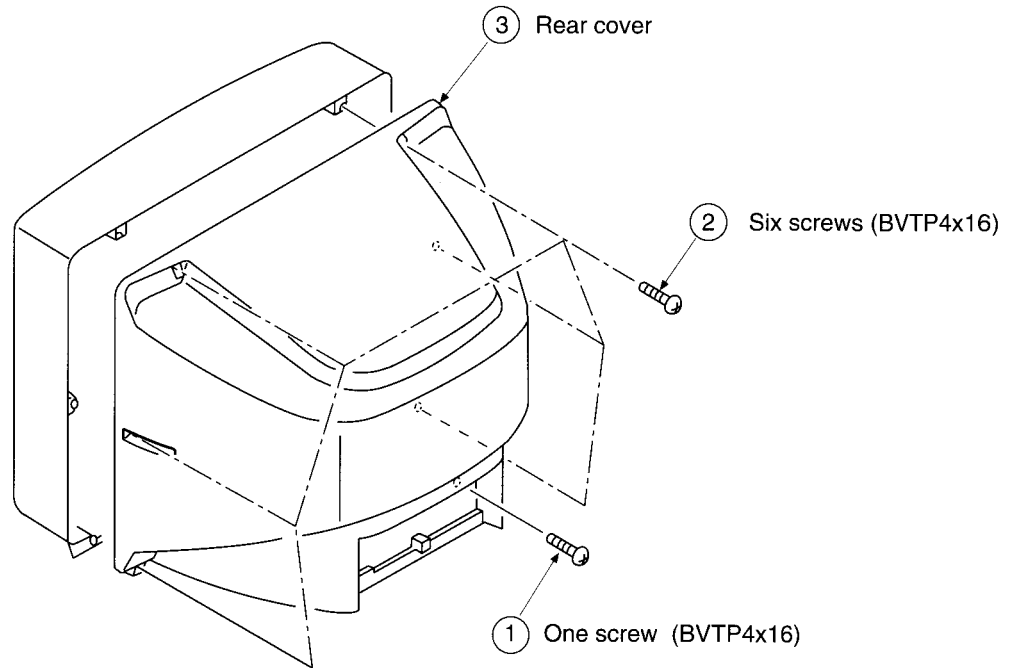


Fig. 46

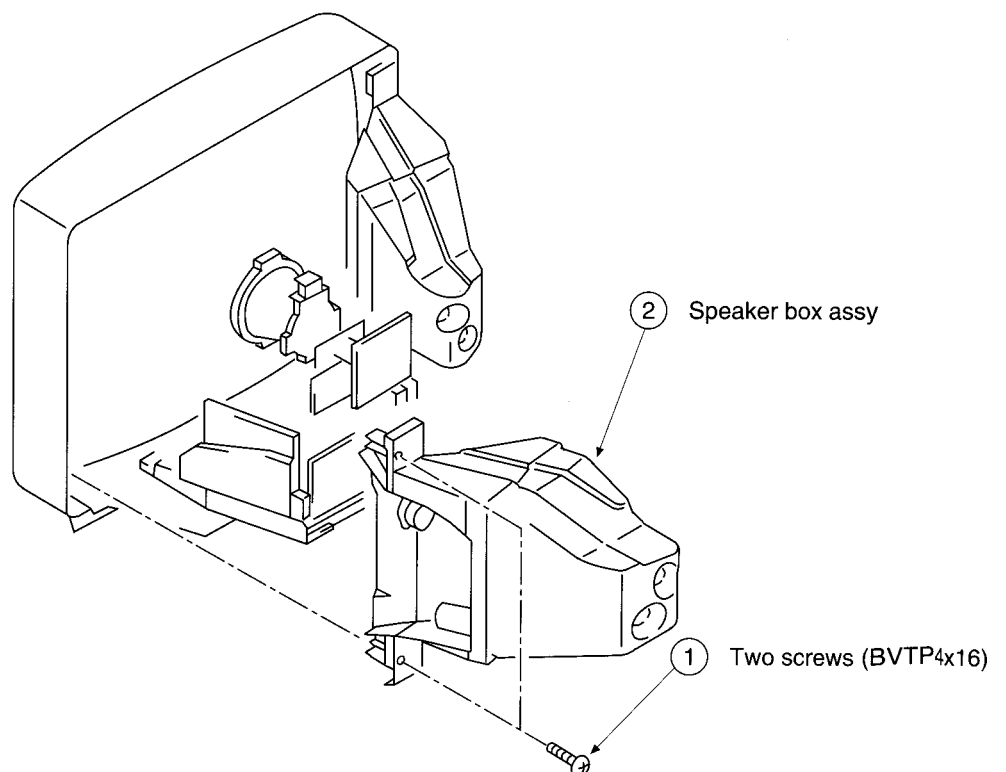


## SECTION 2 DISASSEMBLY

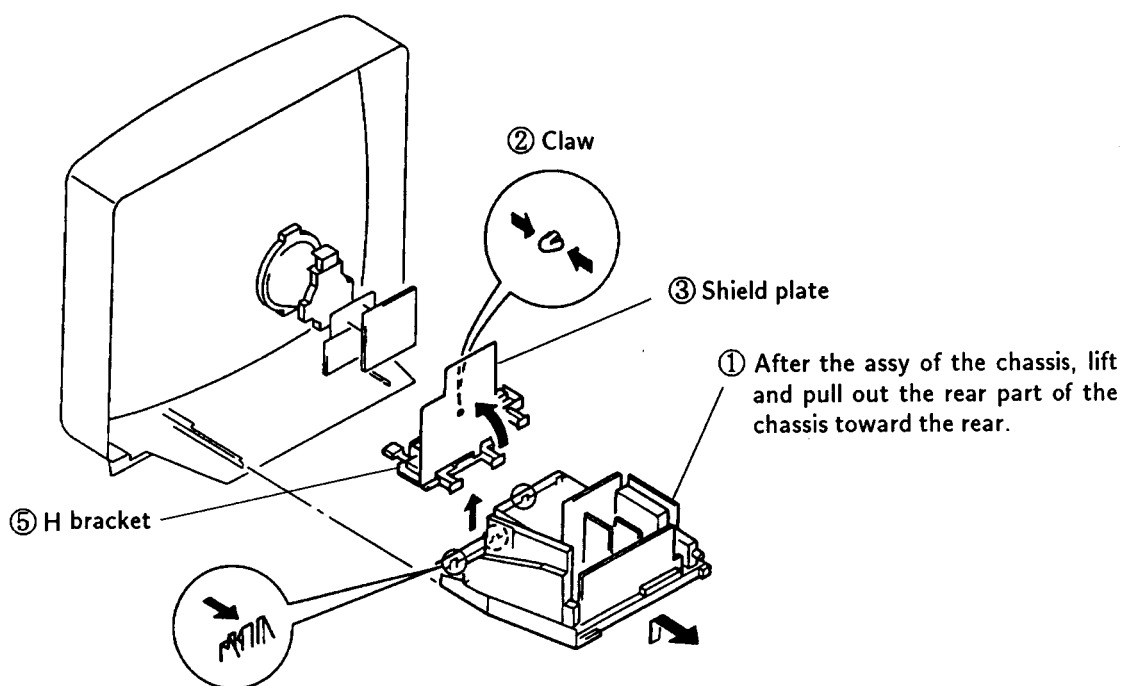
### 2-1. REAR COVER REMOVAL



### 2-2. SPEAKER REMOVAL

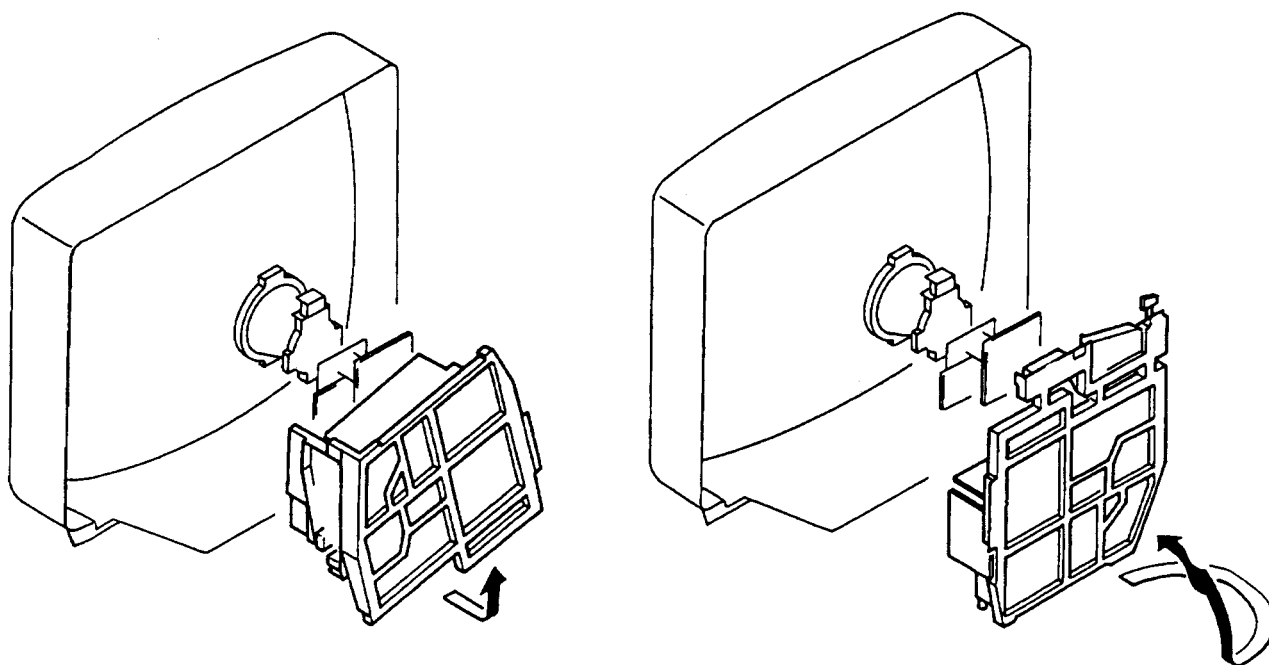


## 2-3. CHASSIS ASSY REMOVAL

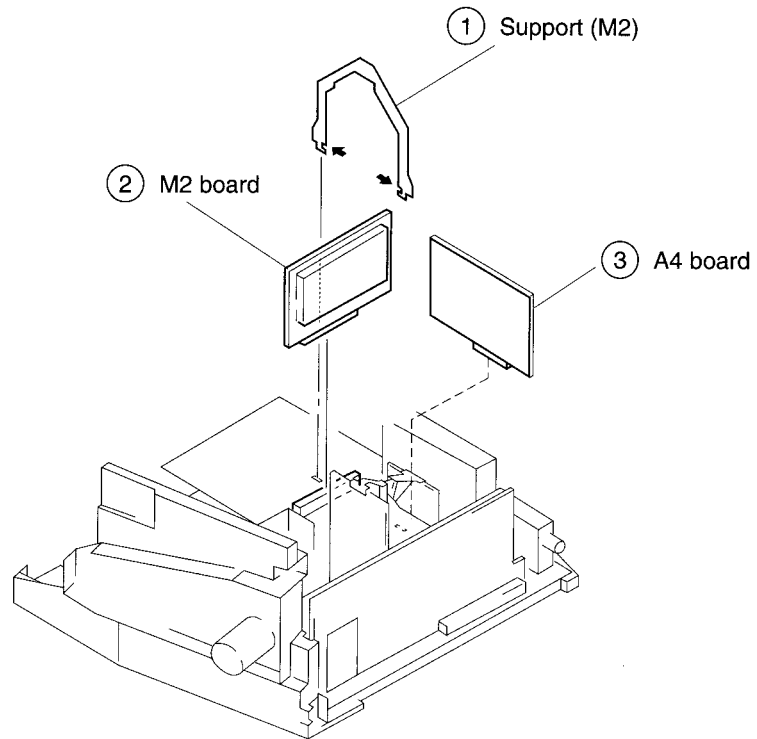


## 2-4. SERVICE POSITION

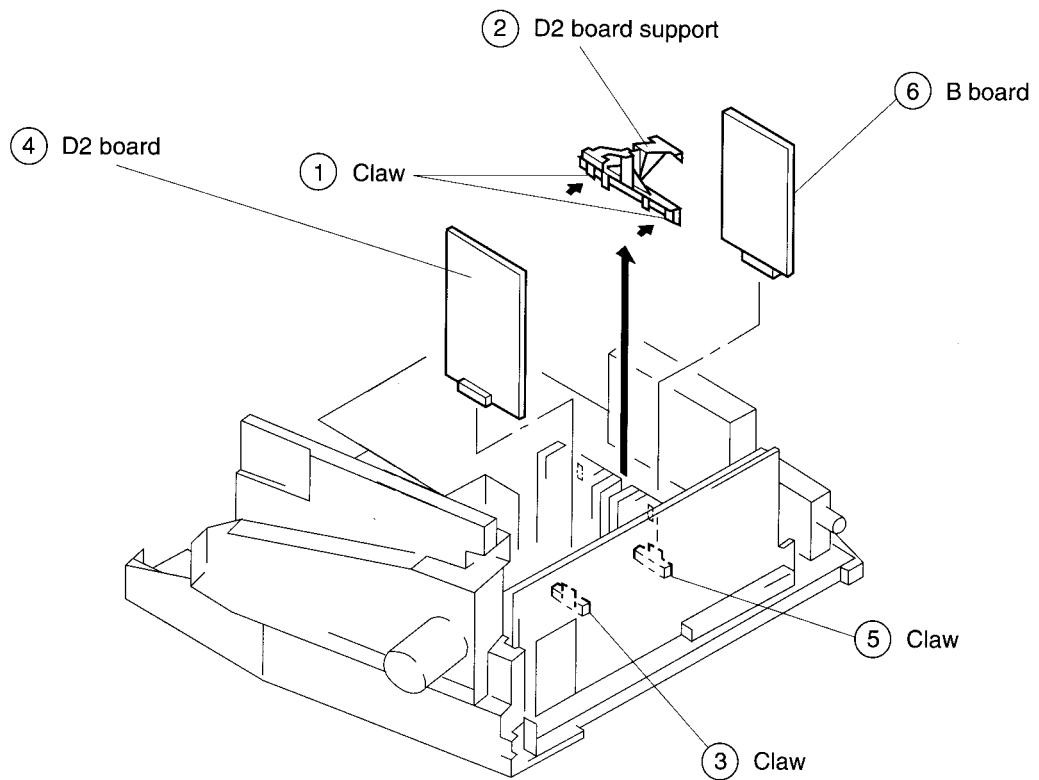
- ※ Remove the H bracket from the chassis assy and then perform the following servicing.  
(Refer to 2-3. CHASSIS ASSY REMOVAL)



## 2-5. M2 AND A4 BOARD REMOVAL

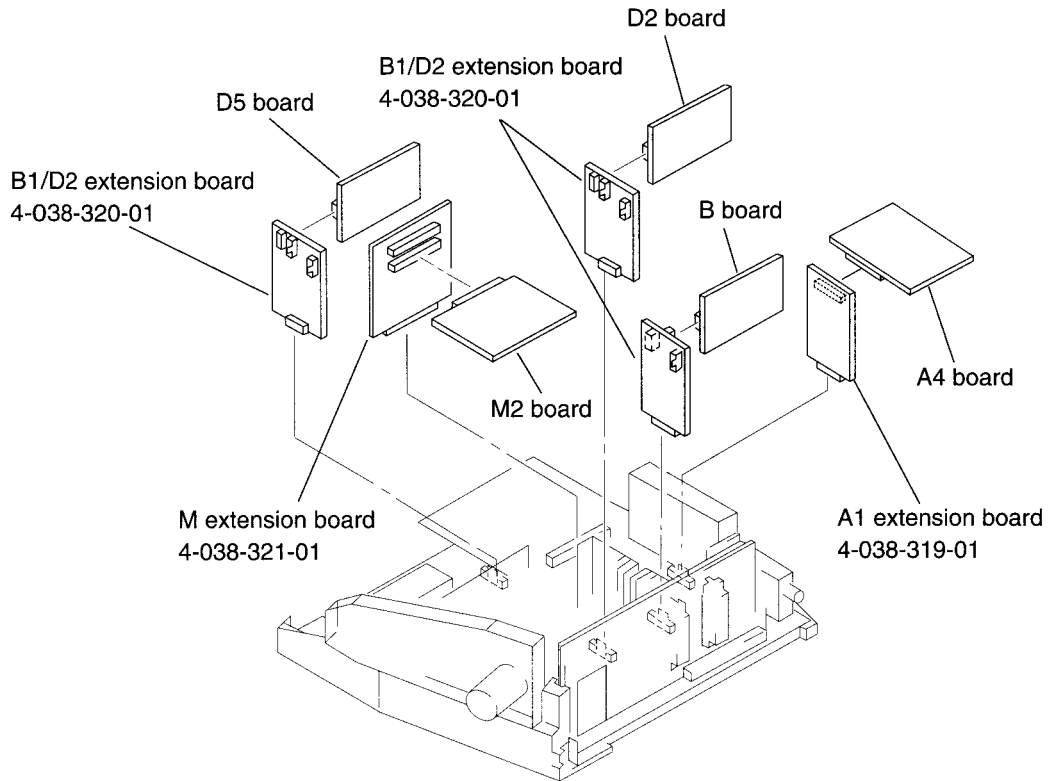


## 2-6. D2 AND B BOARD REMOVAL

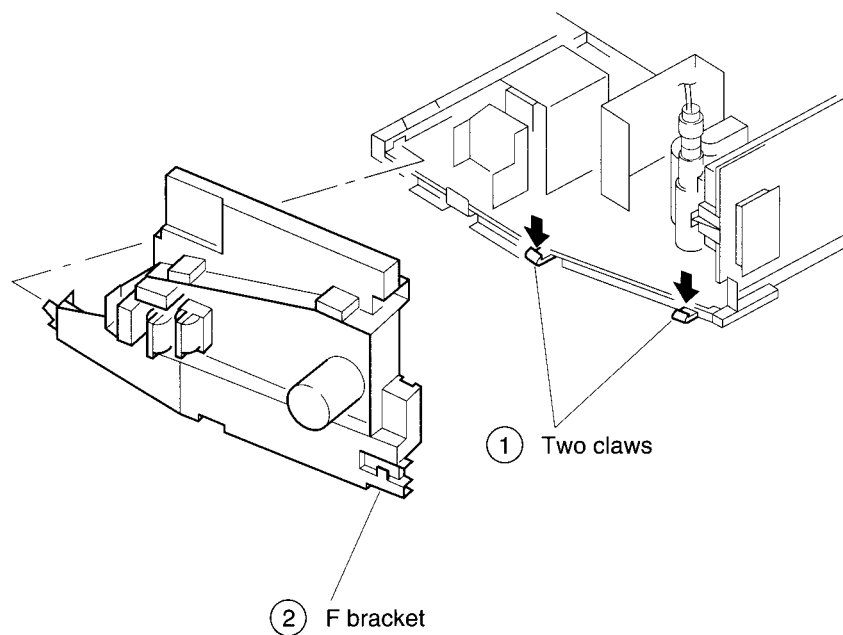




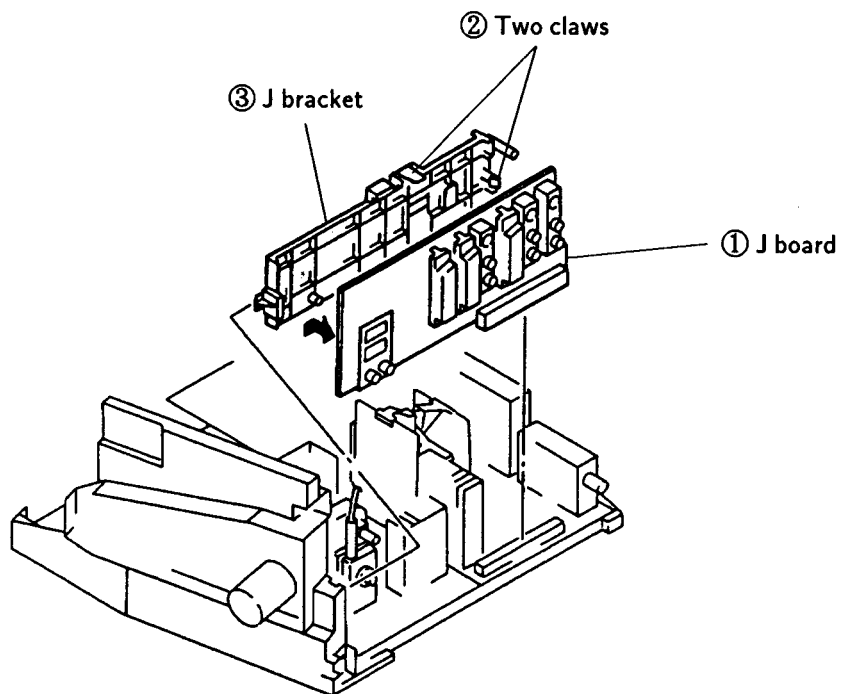
## 2-7. EXTENSION BOARDS



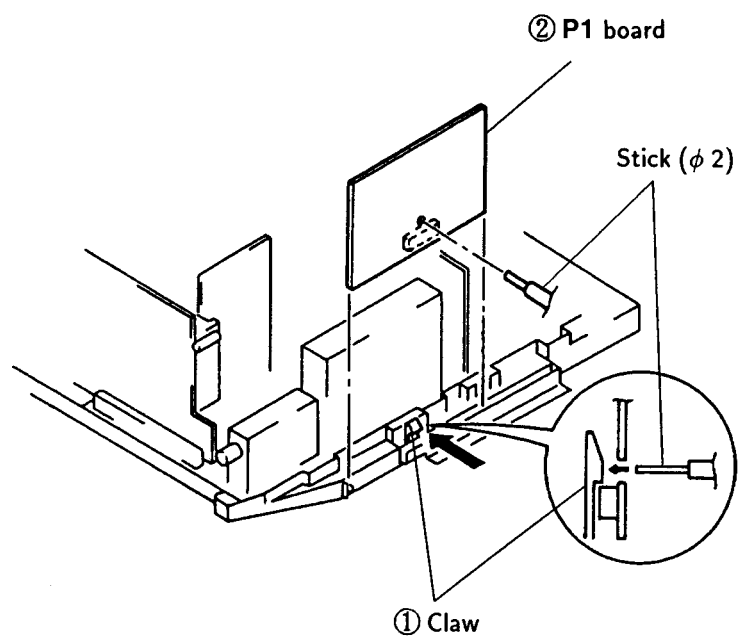
## 2-8. F BRACKET REMOVAL



## 2-9. J BOARD REMOVAL

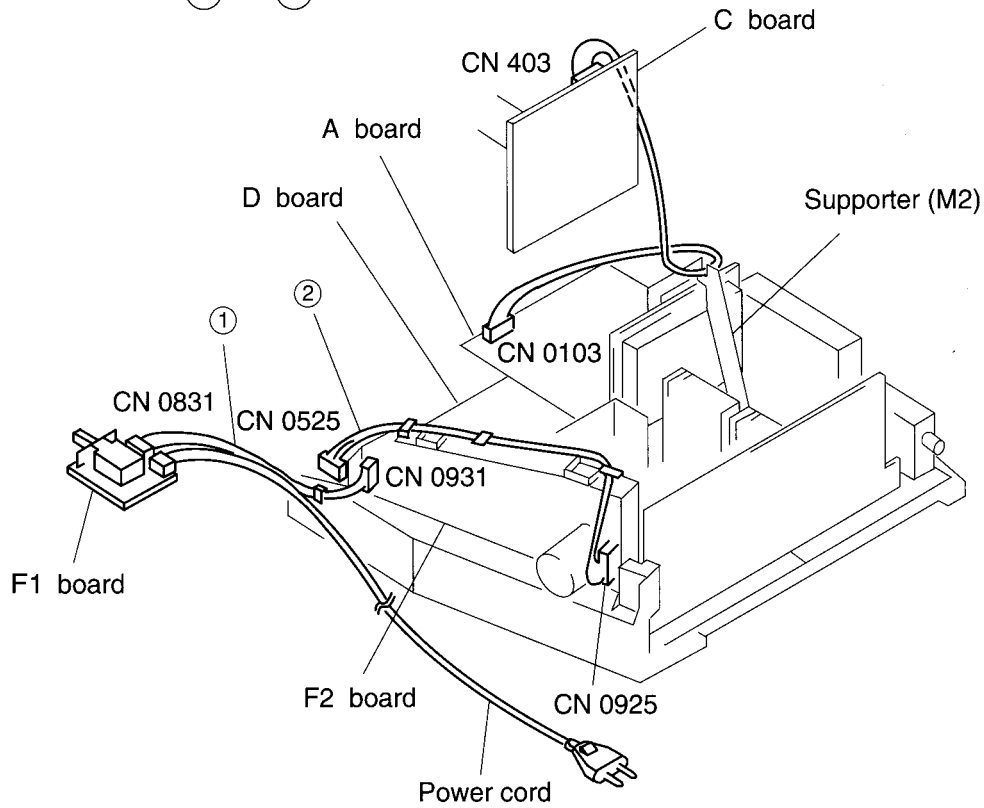


## 2-10. P1 BOARD REMOVAL

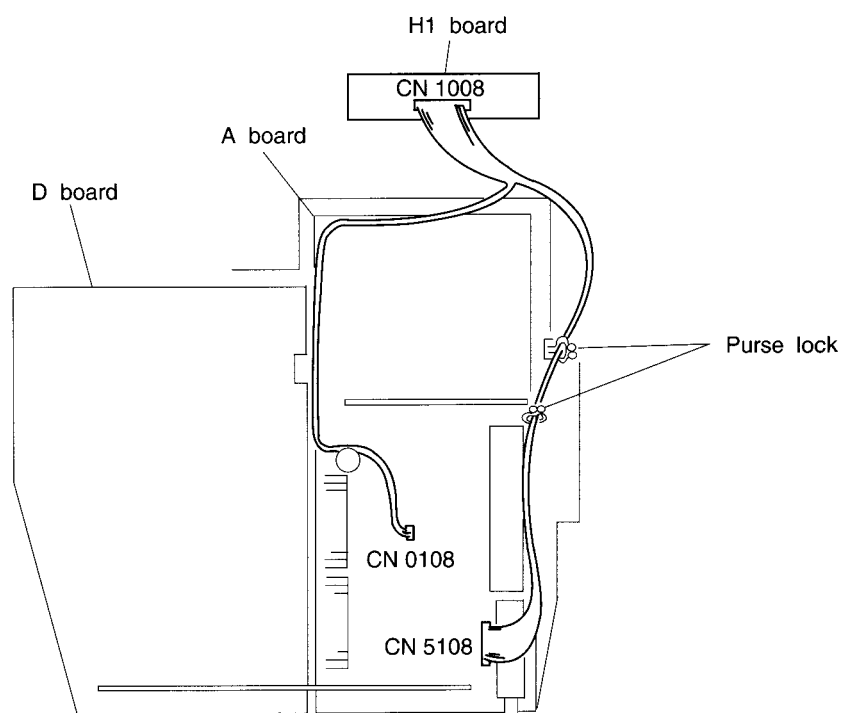


### 2-11-1. WIRE DRESSING

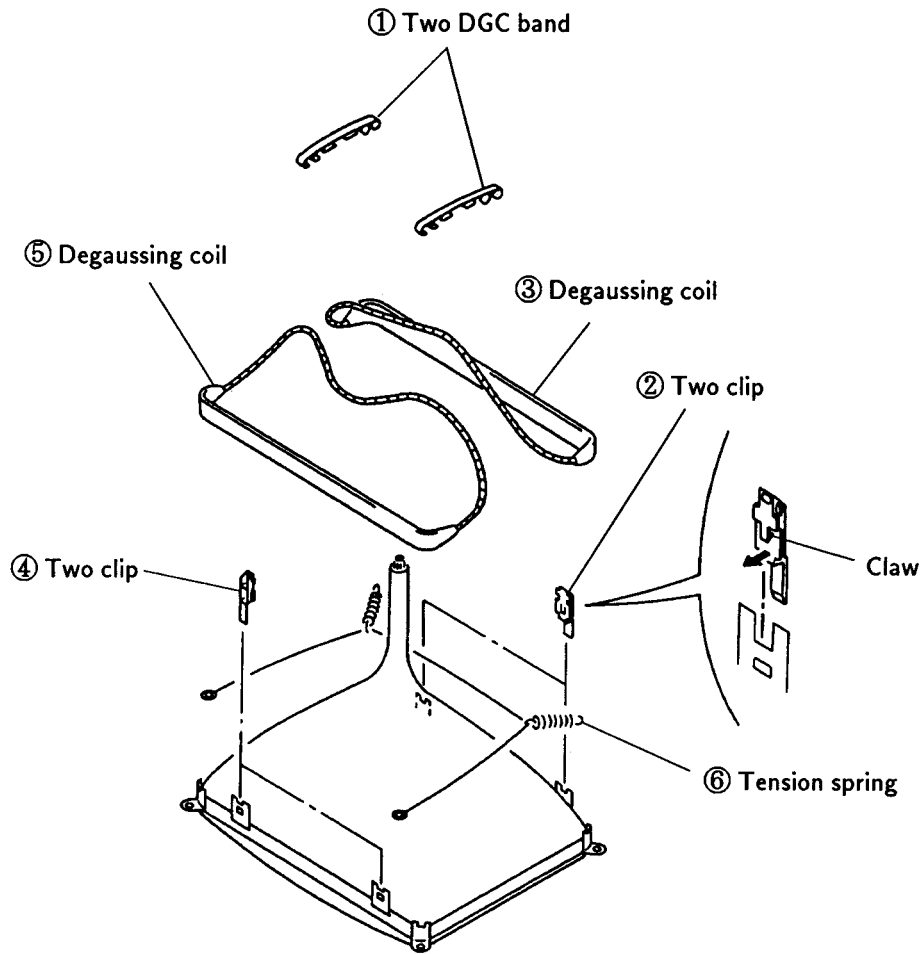
\* Keep distance between ① and ②



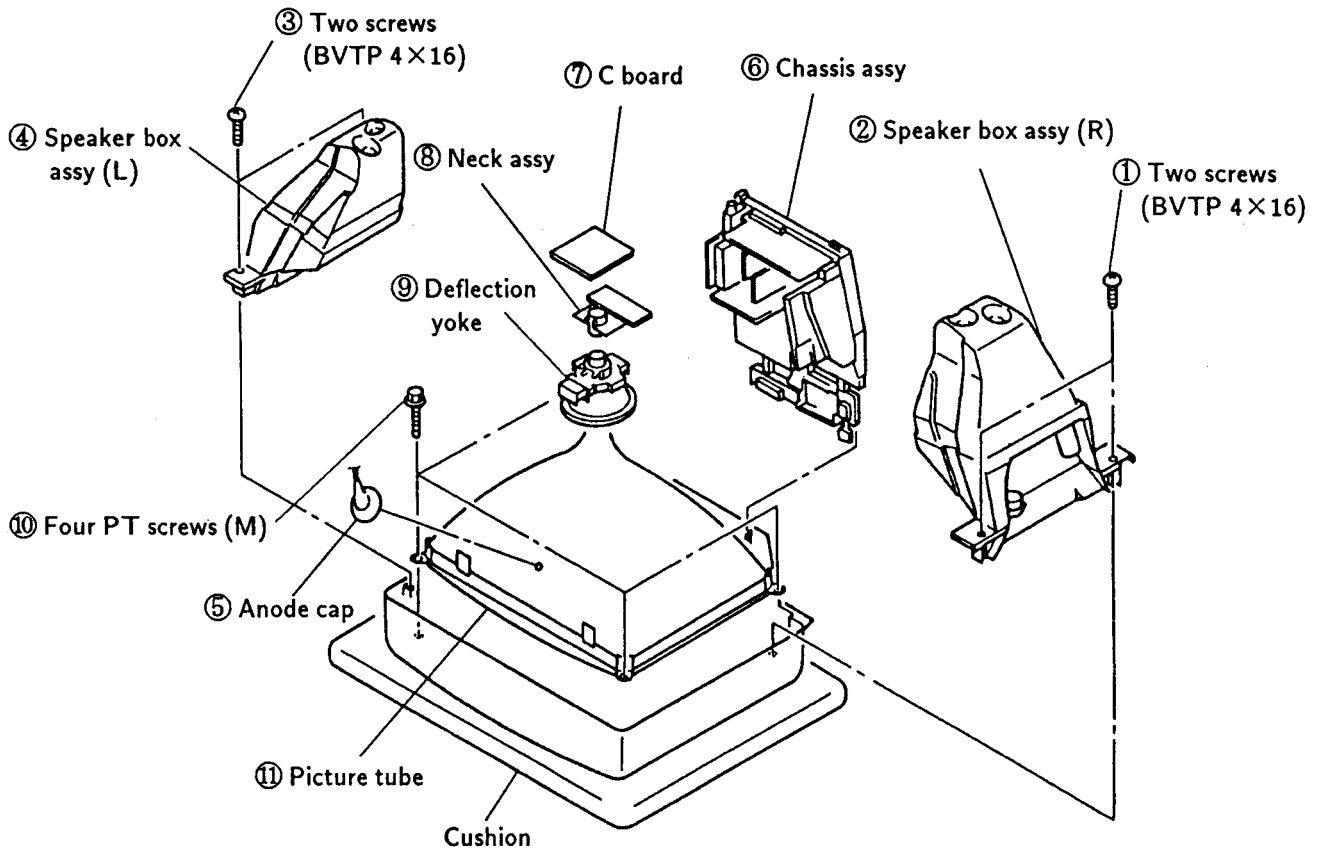
### 2-11-2. WIRE DRESSING



## 2-12. DEGAUSSING COIL REMOVAL



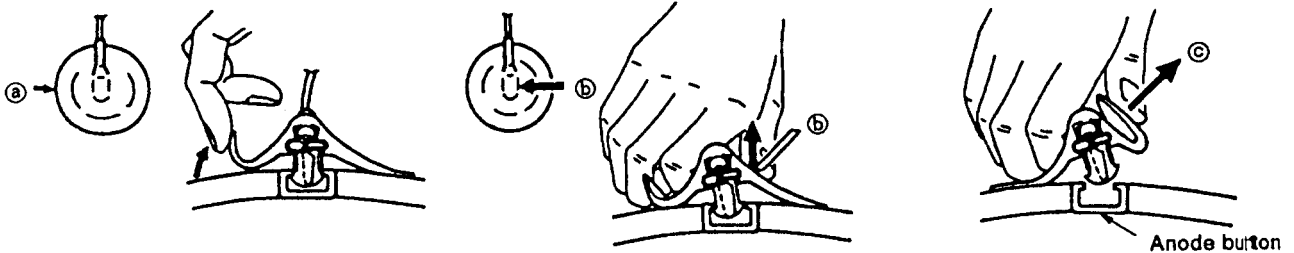
## 2-13. PICTURE TUBE REMOVAL



### • REMOVAL OF ANODE - CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

#### • REMOVING PROCEDURES



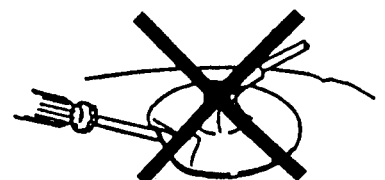
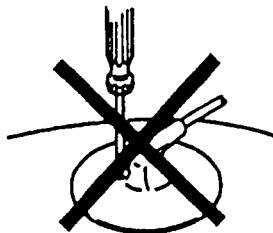
① Turn up one side of the rubber cap in the direction indicated by the arrow ①.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ②.

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ③.

#### • HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!  
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!  
The shatter-hook terminal will stick out or hurt the rubber.



## SECTION 3

### SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there is specific instruction to the contrary, carry out these adjustments with the rated power supply.
- Unless there is specific instruction to the contrary, set the controls and switches this way :

① Contrast ..... 80% (or remote control normal)  
 ☆ Brightness ..... 50%

#### Preparations :

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

#### 3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
 

Contrast } normal  
 Brightness }
2. Position neck assy as shown in Fig.3-2.
3. Set the pattern generator raster signal to red.
4. Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side. (See Fig.3-1 - 3-3)
5. Move the deflection yoke forward and adjust so that entire screen is red. (See Fig.3-1)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig.3-4)

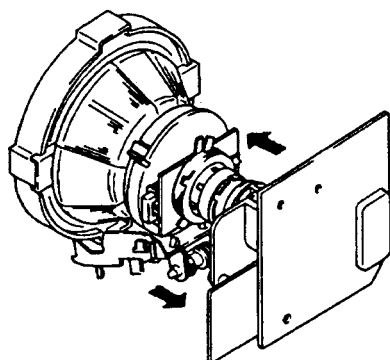


Fig.3-1

- Carry out the following adjustments in this order :

1. Beam landing
2. Convergence
3. Focus
4. White balance

**Note:** Testing equipment required.

1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

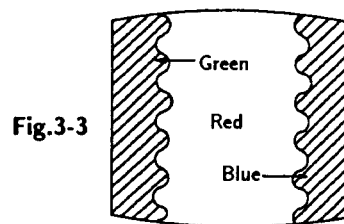
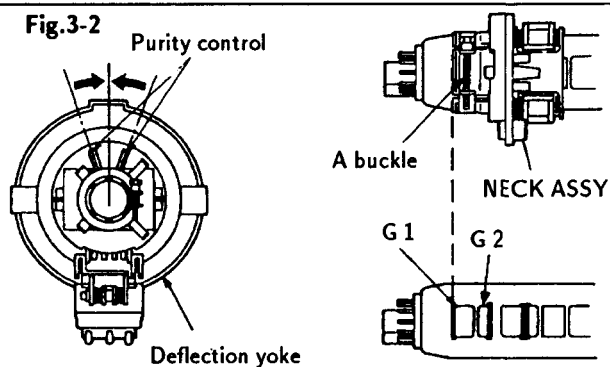


Fig.3-3

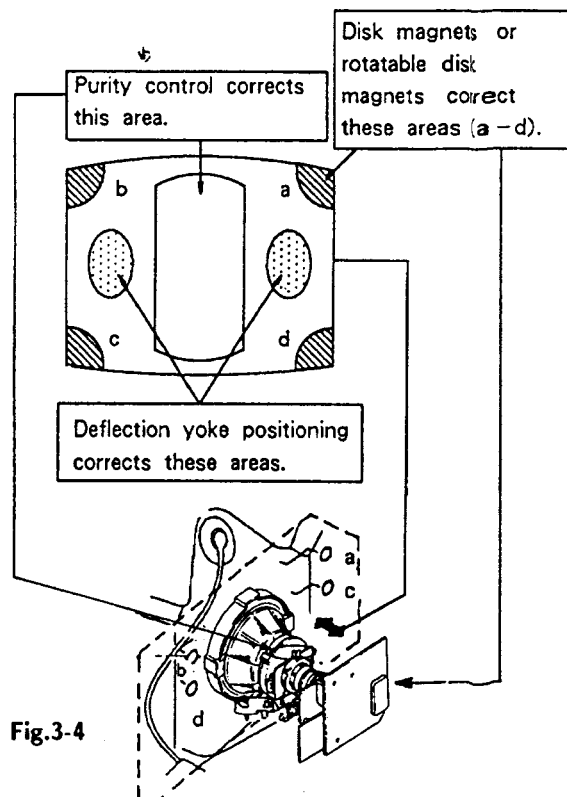


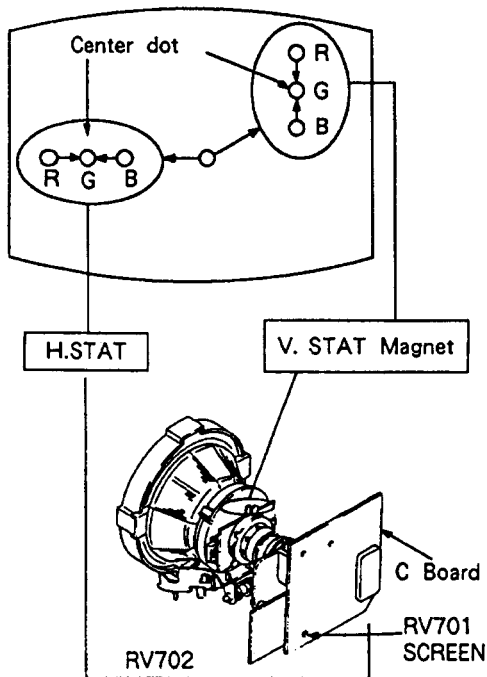
Fig.3-4

### 3-2. CONVERGENCE

#### Preparations :

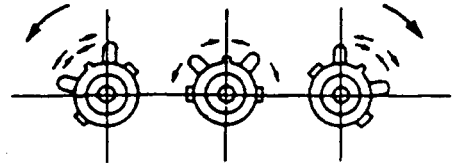
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

#### (1) Horizontal and vertical static convergence

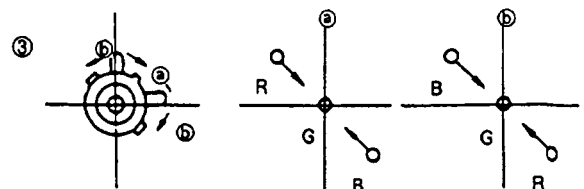
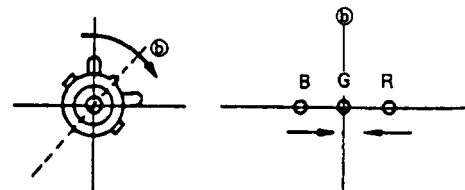
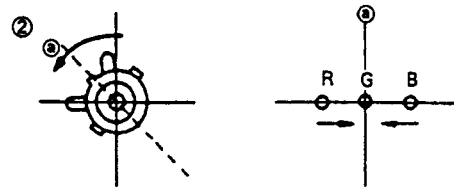
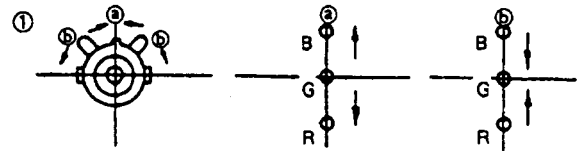


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.  
(In this case, the H.STAT variable resistor and the V. STAT magnet influence each other)

- Tilt the V. STAT magnet and adjust the static convergence by opening or closing the V. STAT magnet.



4. If the V. STAT magnet is moved in the direction of the ㉓ and ㉔ arrows, the red, green, and blue points move as shown below.



**(2)Dynamic convergence adjustment**

1. Adjust horizontal convergence located at the center position of the screen with H STAT VR.
2. Enter into service mode. (Refer to the section 2 “Electrical Adjustment” on how to enter service mode.)
3. Select CXA 1526 on menu.
4. Select each item and adjust them so that each item attains optimal convergence.
5. Press **OK** button to write the data.

CXA 1526

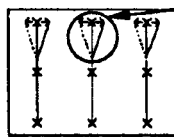
Item No.	Adjustment item	Data Amout
01	DC SHIFT	32
02	UPPER Y BOW	4
03	LOWER Y BOW	5
04	H AMP	48
05	H TILT	29
06	UPPER COR BOW	32
07	UPPER TILT	
08	LOWER COR BOW	32
09	LOWER TILT	32

R.G.B.dots movement on the screen of the set



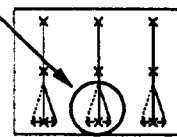
DC SHIFT

Fine adjustment of H STAT



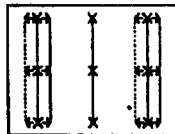
UPPER Y BOW

Adjustment of Y BOW of the upper section of the screen.



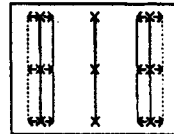
LOWER Y BOW

Adjustment of Y BOW of the lower section of the screen.



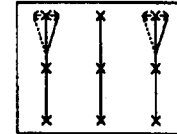
H AMP

H AMP adjustment



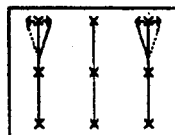
H TILT

H TILT adjustment



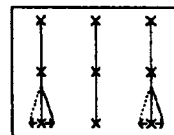
UPPER COR BOW

Adjustment of C BOW of the upper section of the screen.



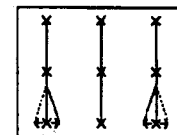
UPPER TILT

Adjustment of TILT of the upper section of the screen.



LOWER COR BOW

Adjustment of C BOW of the lower section of the screen.



LOWER TILT

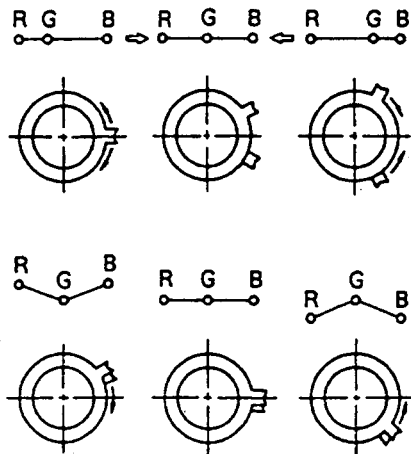
Adjustment of TILT of the lower section of the screen.

At this time, H.TILT, H.AMP, UPPER TILT, UPPER COR, BOW, LOWER TILT, and LOWER COR, BOW look like all the same, but the movement of the

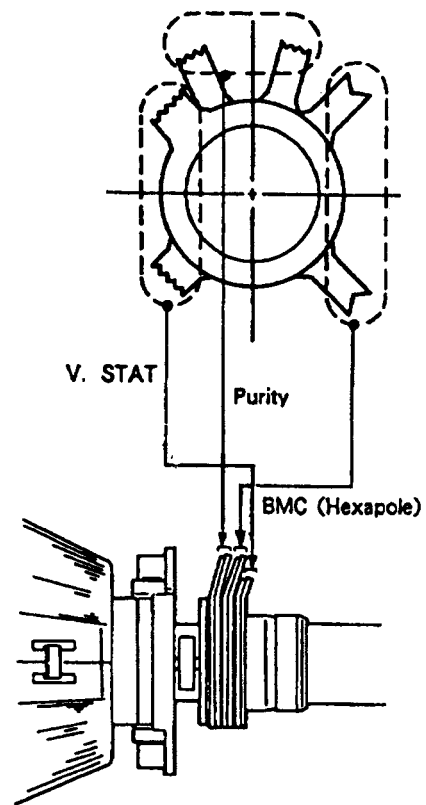
right and left dots are reverse in all the TILT system. (Pay attention to the dotted lines.)



● Operation of BMC (Hexapole) Magnet

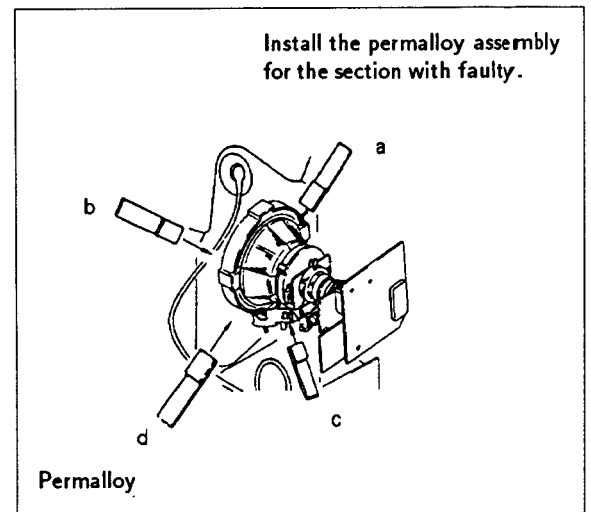
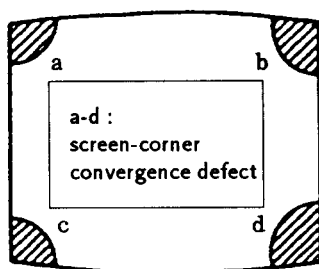


- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking.  
Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).



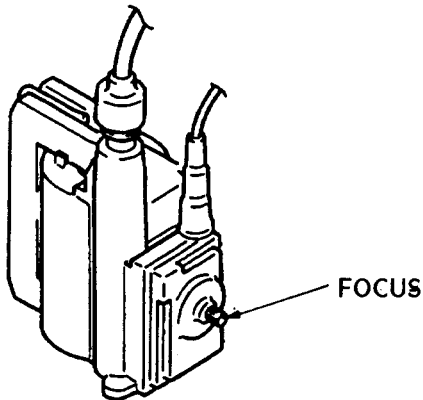
(3) Screen corner convergence

If you cannot adjust corner convergence properly, correct them with permalloy.



### 3-3. FOCUS

Adjust the focus to optimize the screen.



### 3-4. WHITE BALANCE

#### Screen G2 Setting

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its lowest level.
3. Apply 180V DC to the R,G, and B cathodes with an external power supply.
4. While watching the picture, adjust G 2 control RV 701 (Screen) to the point just before the return lines disappear.

#### White balance adjustment

1. Receive all-white signal.
2. Enter into service mode. (Refer to the section 4 "Electrical Adjustment" to how to enter service mode.)
3. Select CXA 1587 on menu.

#### CXA 1587

Item No.	Adjustment item	Data amount
09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.

4. Set picture to MAX.
5. Adjust G-DRIVE B-DRIVE with buttons so that the white balance becomes optimum.
6. Press button to write the data for each item.
7. Set picture to MIN.
8. Adjust G-AUTO CUT OFF, B-AUTO CUT OFF, R-MANUAL CUT OFF, G-MANUAL CUT OFF and B-MANUAL CUT OFF with buttons so that the white balance becomes optimum.
9. Press button to write the data for each item.

## SECTION 4

### CIRCUIT ADJUSTMENTS

#### 4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander, RM-831.

##### HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set while pressing any two buttons on the front panel.

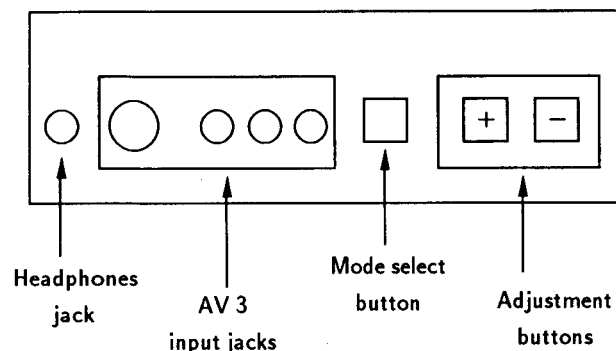


Fig.4-1

2. "TT" will appear on the upper right corner of the screen.

Command operation in service mode

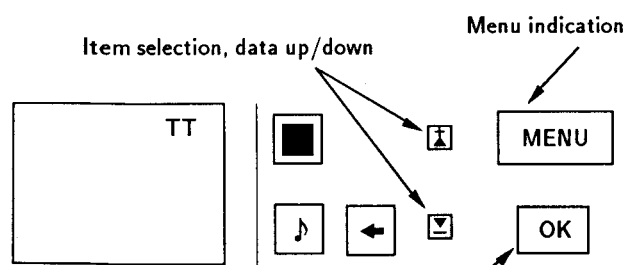


Fig.4-2

Fig.4-3

3. Press the **MENU** button of the commander to get the menu on screen.

MAIN MENU	
Programme Table	
Video Connection	
Timer	
Preset	
Picture Control	
Sound Control	
Language	
> DEMO	
Select   and press OK	

Fig.4-4

4. Press the and buttons of the commander and move > to DEMO.
5. Press **OK** button to proceed to the next menu.
6. The menu of fig.4-5 will appear on screen. Select DEVICE corresponding to the adjustment item from the table on next page.

DEVICES
Initialize
> CXA1587S
CXD 2018
TDA 9145
CXA 1526
TDA 6612
CX 7948 A
P/P SERVICE
Select   and press OK

Fig.4-5

7. If adjustment item is CXA1587S, press the button and move > to CXA1587S.

##### CXA1587S

Item No.	Adjustment item	Data Amount
01	PICTURE	53
02	COLOR	31
03	BRIGHT	31
04	HUE	31
05	SHARPNESS	7
06	RGB PICTURE	13
07	SUB CONTRAST	ADJ.
08	SUB COLOR	ADJ.
09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.

8. Press **OK** button to get the next selection menu.
9. Press button and move > to the adjustment item and press **OK** button.
10. Press the and buttons to change the data in order to comply each standard.
11. Press **OK** button to write data.
12. Turn off the power to quit service mode when completing the adjustment.

## CXA1587S

Item No.	Adjustment item	Data Amount
01	PICTURE	53
02	COLOR	31
03	BRIGHT	31
04	HUE	31
05	SHARPNESS	7
06	RGB PICTURE	13
07	SUB CONTRAST	ADJ.
08	SUB COLOR	ADJ.
09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.
21	GAMMA LEVEL	0
22	DC TRANSFER RATIO	3
23	DINAMIC PICTURE	0
24	Y FILTER ADJ	ADJ.
25	Y DELAY TIME	15
26	Y DELAY SWITCH 1	0
27	Y DELAY SWITCH 2	1
28	SHARPNESS LIMIT	ON
29	ALL BLK	OFF
30	H SHIFT	32
31	DAC TEST	ON
32	PRE/OVER SHOOT	12
33	SHARPNESS FO	2
34	SUB SHARPNESS	3
35	R MUTE	OFF
36	G MUTE	OFF
37	B MUTE	OFF

## CXA 1526

Item No.	Adjustment item	Data Amount
01	DC SHIFT	32
02	UPPER Y BOW	4
03	LOWER Y BOW	5
04	H.AMP	48
05	H TILT	29
06	UPPER COR BOW	32
07	UPPER TILT	32
08	LOWER COR BOW	32
09	LOWER TILT	32

38	AGING 1	OFF
39	AGING 2	OFF
40	AKB OFF	ON
41	INHIBIT RGB	OFF
42	FORCED RGB	OFF
43	V/2 V	OFF
44	AXIS	PAL
45	HUE SW	OFF
46	V EXTENTION	OFF
47	AFC 1	1
48	AFC 2	0
49	AFC OFF	ON
50	REF.POSITION	0

## CXD 2018

Item No.	Adjustment item	Data Amount
01	V SIZE	ADJ.
02	V SHIFT	ADJ.
03	S CORRECTION	ADJ.
04	V LINEARITY	ADJ.
05	H SIZE	ADJ.
06	PIN AMP	ADJ.
07	TILT	ADJ.
08	UPPER CORNER	ADJ.
09	LOWER CORNER	ADJ.
10	V BOW	ADJ.
11	ANGLE	ADJ.
12	HV COMP.V	13
13	HV COMP.H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	INTERLACE	ON
20	H SHIFT	32
21	N/S CORRECTION	ADJ.

Typical Value (OSD based)when receiving PAL Philips pattern.

## TDA 6612

Adjustment item	Data Amount
Stereo-Separation	30

Should be adjusted twice 4 : 3 and 16 : 9 mode.

**Y FILTER ADJUSTMENT**

1. Input PAL RED pattern.
2. Connect an oscilloscope to CN 0403 ① pin (R IN) on the C board.
3. Enter into service mode and press 3, 8.
4. Adjust data by  $\triangle$  or  $\nabla$  to minimize the chroma element of CN 0403 ① pin.

**SUB BRIGHTNESS ADJUSTMENT**

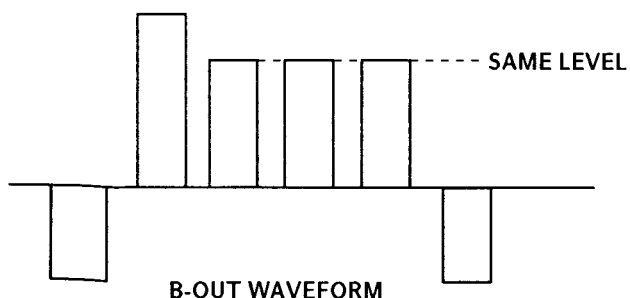
1. Input Phillips pattern.
2. Enter into service mode and press 23.
3. Adjust data so that 0-IRE of the grey scale and CUT -OFF 20-IRE glitter slightly.

**SUB CONTRAST ADJUSTMENT**

1. Input a video that contains small 100% area on the Black Back ground.
2. Enter into service mode and press 01 to have PIC max followed by 21.
3. Adjust data so that 2.5 Vp-p can be obtained at ① CN 0403 (R IN).

**SUB COLOR ADJUSTMENT**

1. Input PAL color bar.
2. Connect an oscilloscope to CN 0403 ③ pin (B IN) on the C board.
3. Enter into service mode and press 22 of CXA 1587 S, 8 SUB COLOR.
4. Adjust data so that the right sides of the waveform will be the same.

**STEREO-SEPARATION ADJUSTMENT**

1. Input 1kHz stereo signal to the L-ch and 400Hz stereo signal to the R-ch.
2. Enter into service mode and press 19.
3. Adjust data so that sound does not leak to the R-ch and the L-ch.

**DRIVE AND CUT OFF**

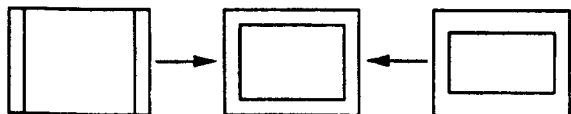
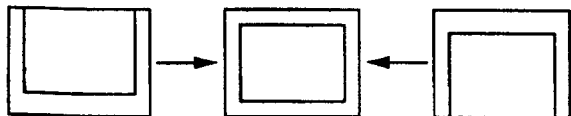
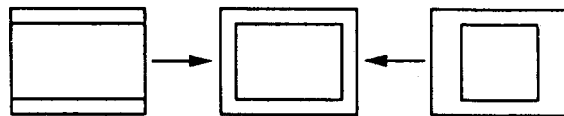
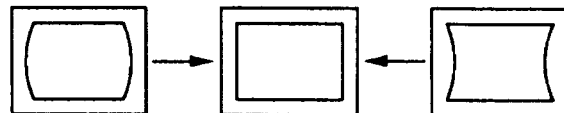
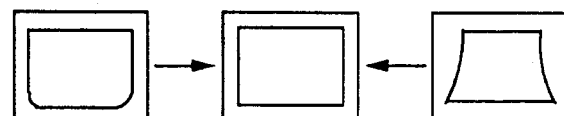
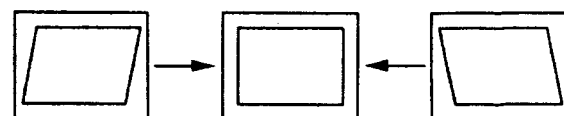
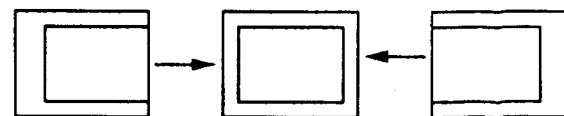
See direct test mode list attached and refer to sub brightness or such for adjustment method.

**DEFLECTION SYSTEM ADJUSTMENT**

1. Enter into service mode and select CXD 2018.
2. Select and adjust each item in order to get an optimum image.

**CXD 2018**

Item No.	Adjustment item	Data Amount
01	V SIZE	ADJ.
02	V SHIFT	ADJ.
03	S CORRECTION	ADJ.
04	V LINEARITY	ADJ.
05	H SIZE	ADJ.
06	PIN AMP	ADJ.
07	TILT	ADJ.
08	UPPER CORNER	ADJ.
09	LOWER CORNER	ADJ.
10	V BOW	ADJ.
11	ANGLE	ADJ.
12	HV COMP.V	13
13	HV COMP.H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAM	OFF
19	NON INTERLACE	ON
20	H SHIFT	32
21	N/S CORRECTION	ADJ.

**V SIZE****V SHIFT****S CORRECTION****V LINEARITY****H SIZE****PIN AMP****TILT****UPPER CORNER PIN****LOWER CORNER PIN****V BOW****ANGLE****H SHIFT****N/S CORRECTION**

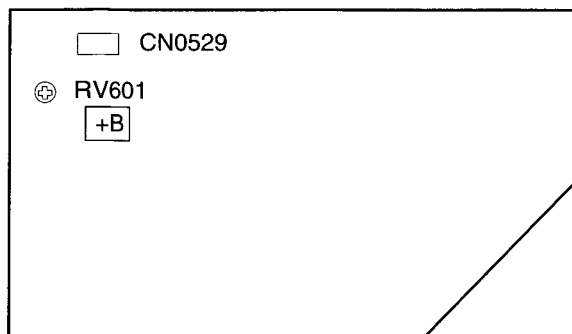
3. Press **OK** button to write the data.

If menu display may disturb the adjustment press **✕** to clear, to resume it, press **✕** again.

## 4-2. VOLUME ELECTRICAL ADJUSTMENTS

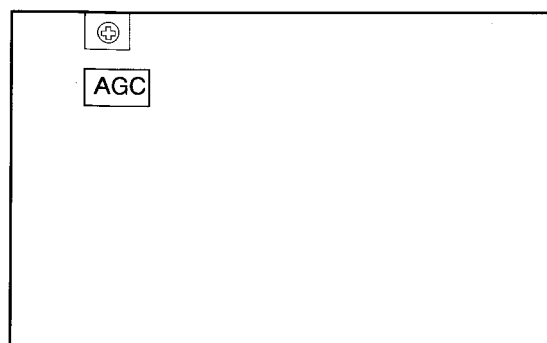
### +B (+135V) ADJUSTMENT (RV601)

D BOARD



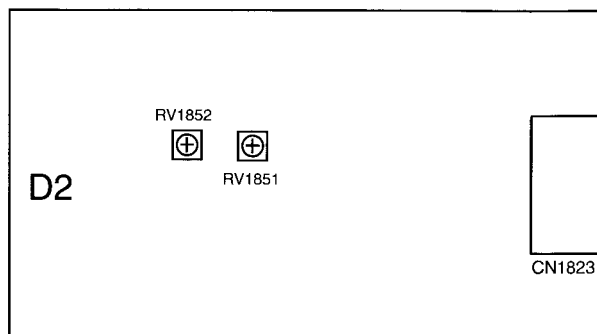
1. Switch on the power to the TV set.
2. Connect a digital multi-meter to pin ① of CN0529 on D board.
3. Adjust RV601 on D board to  $+135V \pm 0.5V$ .

### AGC ADJUSTMENT (IF BLOCK)

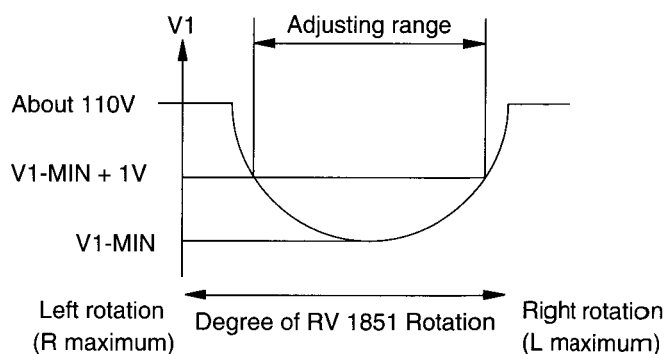


1. Receive an off-air signal.
2. Adjust the AGC VR so that there is no snow noise or cross-modulation visible on the screen.
3. Change the receiving channel and confirm status.

### DRIVE PULSE PHASE ADJUSTMENT (RV 1851)



1. While measuring the voltage V1 at both edges of C1859, rotate RV 1851 so that it becomes minimum. The adjusting range is from (the voltage at which V1 becomes minimum) V1 MIN to 3V, which means, adjust to between V1 MIN to V1 MIN + 1V.



### 4-3. TEST MODE 2 :

Is available by pressing Test button two times, OSD "TT" appears. The functions described below are available by pressing the two numbers. To release the Test Mode 2, press two times 0, or switch TV in Standby Mode.

00	switch Test Mode 2 off
01	picture maximum
02	picture minimum
03	Volume 35%
04	Volume 50%
05	Volume 65%
06	Volume 80%
07	Aging Condition (Volumin., Picture max., Brightness max., Aging 2 Mode of CXA 1587S, TDA 2595 is locked to CXA 1587S via PIN 34 of $\mu$ -Con.)
08	Shipping Condition (Analog Values are RESET due to factory setting, Prog 1 is selected, TT Mode is switched off)
09	dummy
10	Tenth entry is deleted
11	Balance
12	Hue
13-14	dummy
15	Read factory setting from NVM Reads Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, Colour values from ROM to the actual used values (Last Power Memory)
16	Save actual used values as RESET values Memorize actual used values Balance, Treble, Bass, Hue, Sharpness at RESET position in NVM
17	Preset Level for AV Sources
18	dummy
19	Stereo Separation
20	Tenth entry is deleted
21	Sub Contrast
22	Sub Colour
23	Sub Brightness
24-29	dummy

30	Tenth entry is deleted
31	Green Drive
32	Blue Drive
33	Green Cut Off (Auto Cut Off)
34	Blue Cut Off (Auto Cut Off)
35	Red Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
36	Green Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
37	Blue Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
38	Y-Filter adjustment (Trap is switched off and TDA 9145 is switched in forced NTSC Mode)
39	dummy
40	Tenth entry is deleted
41	Default setting of CXA 1587S (Only in Plog 99 available)
42	Default setting of CXA 2018 (Only in Plog 99 available)
43	Default setting of CXA 1526 (Only in Plog 99 available)
44	(all Port High) Not yet
45	(all Port High) Not yet
46-48	dummy
49	Erase the NVM Testbyte (this byte detects already stored NMV's) After selecting this function, switch TV Off and On → the NVM will be preset by $\mu$ -Controller. (Not the channel data)

Note: For No. 35, 36, 37 and 38 special pressing (AKB, forced Color Mode, Trap) is selected. After selecting a new Test Mode Number, the AKB is switched ON, the Trap is switched On and TDA 9145 is switched to Auto Search Mode.

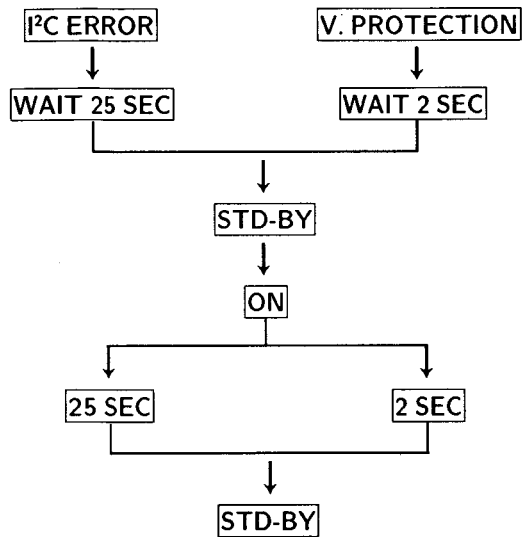
In Test Mode 2 the Menu display is switchable by Speaker-Off button.



#### 4-4. ERROR MESSAGE

Self diagnos system can operates as follows.

- When MP can't get the acknowledge back from the device, LED starts flashing according to the table as attached.



In case of more errors in parallel, the blinking error shows max. Priority according to the error number (e.g. error 2 and error 5 appears together, then LEDs shows error 2) .

TABLE OF ERRORS

ERROR COUNT	IC TYPE	FUNCTION
1	I I C BUS	SDA low
2	X 24 C 16	EEPROM
3	SDA 3202	Tuner PII
4	TDA 9145	Colour decoder
5	CXA 1587S	RGB/Jungle
6	TDA 6612	Sound processor
7	CXD 2018	V deflection
8	CXA 1545	AV switch
11	SDA 5248	Text
13		V protection

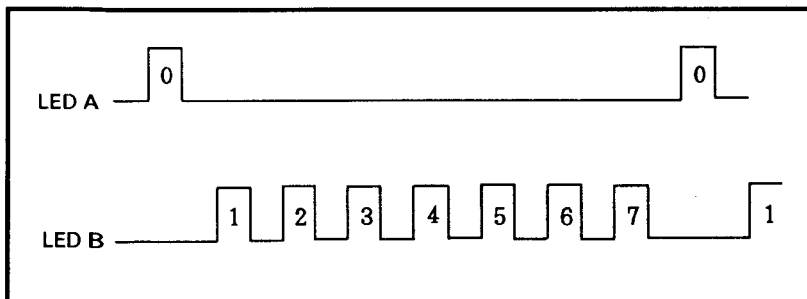
Stand by LED blinking

No IK return

#### 4-5. ERROR I I C BUS DIAGNOSIS SYSTEM IN AE2 CHASSIS

For all ICs in AE 2 chassis which are necessary to get picture and sound there is a built in error I I C Bus diagnosis system.

In case of no acknowledge bit, LED A and LED B starts blinking as shown.



# MEMO

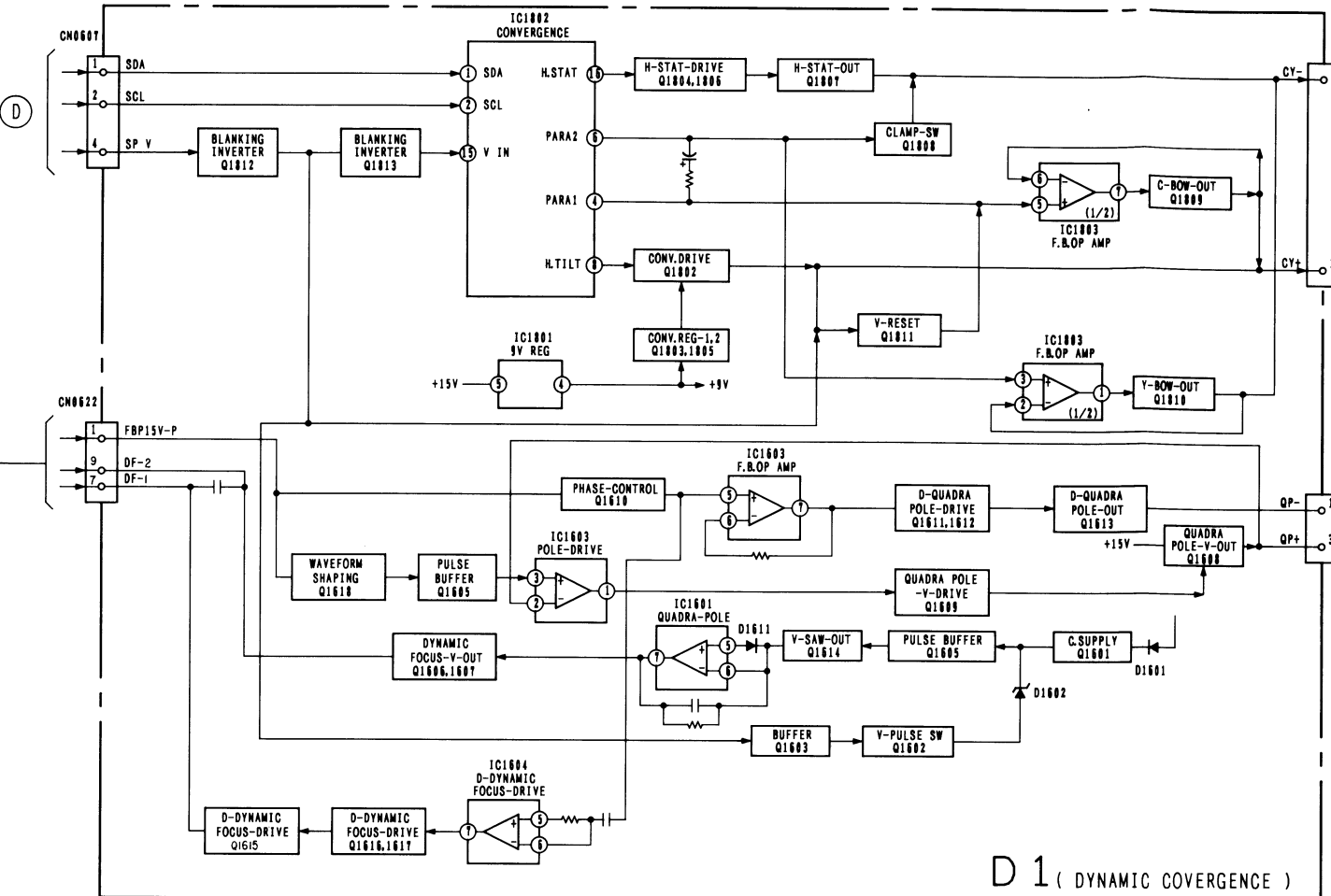
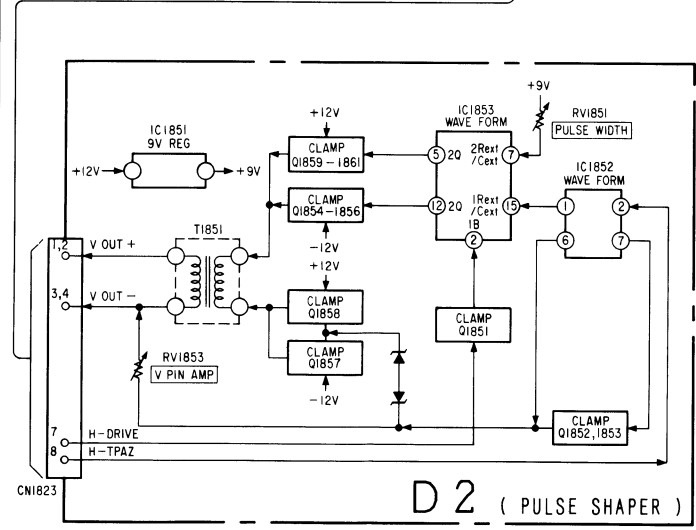
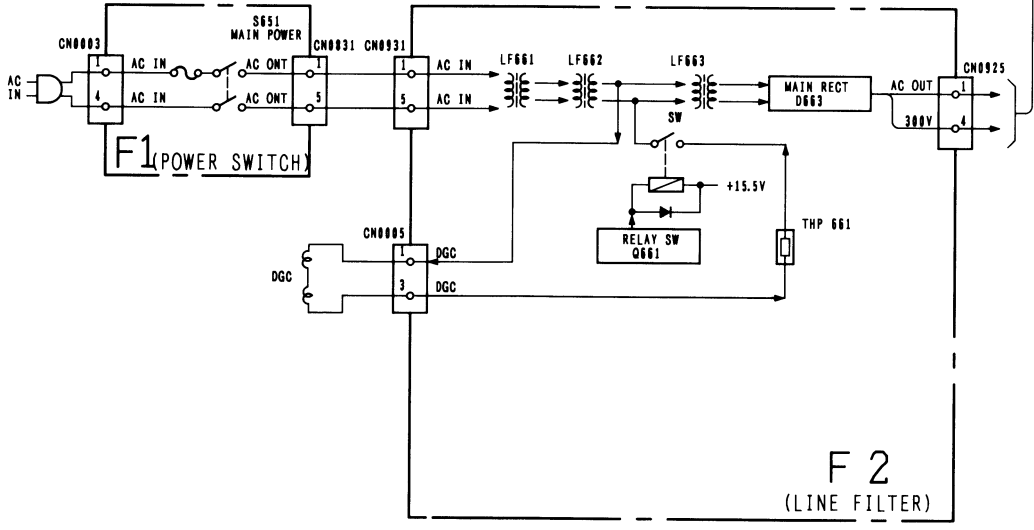
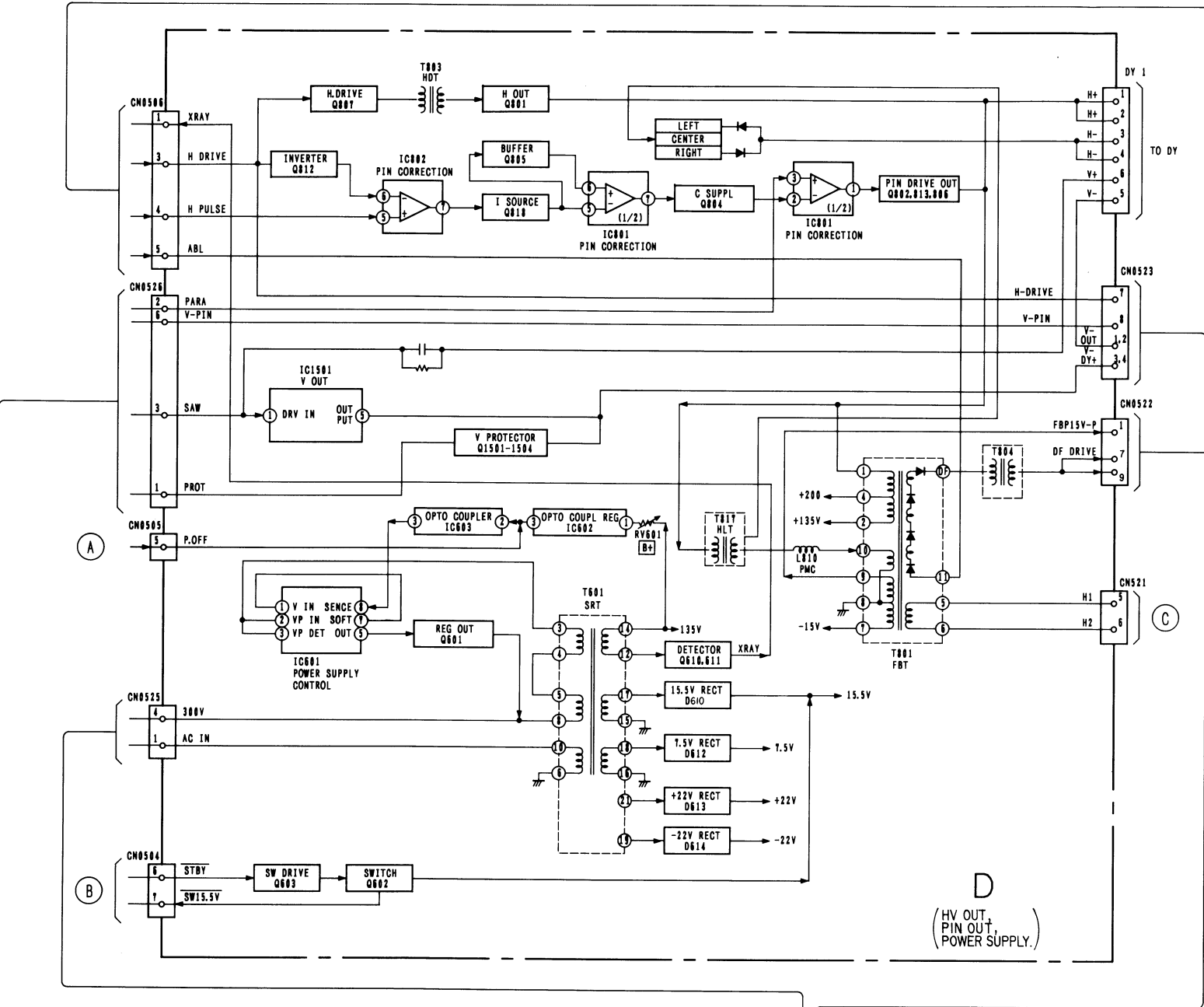
This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

SECTION 5  
DIAGRAMS

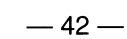
KV-S343

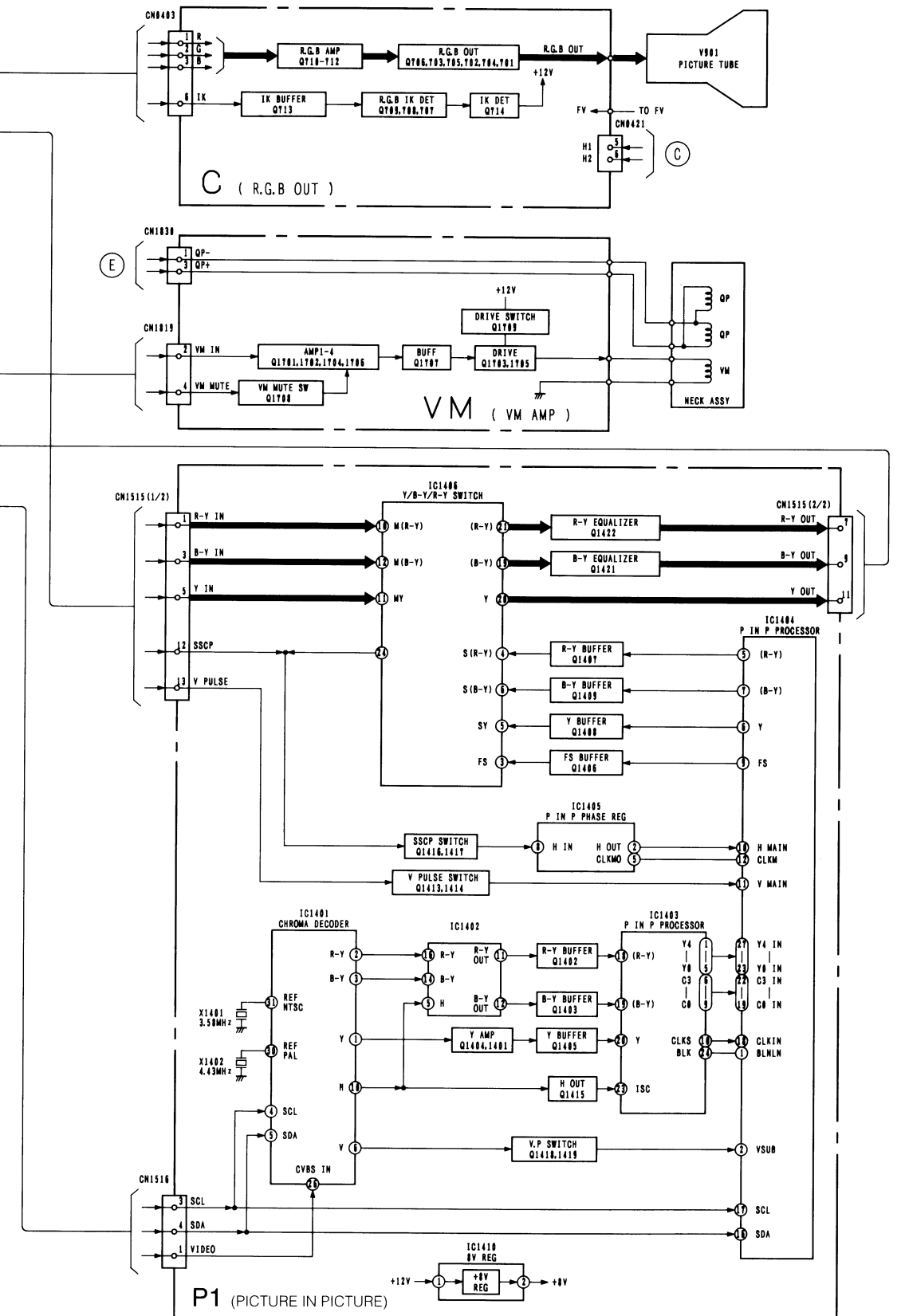
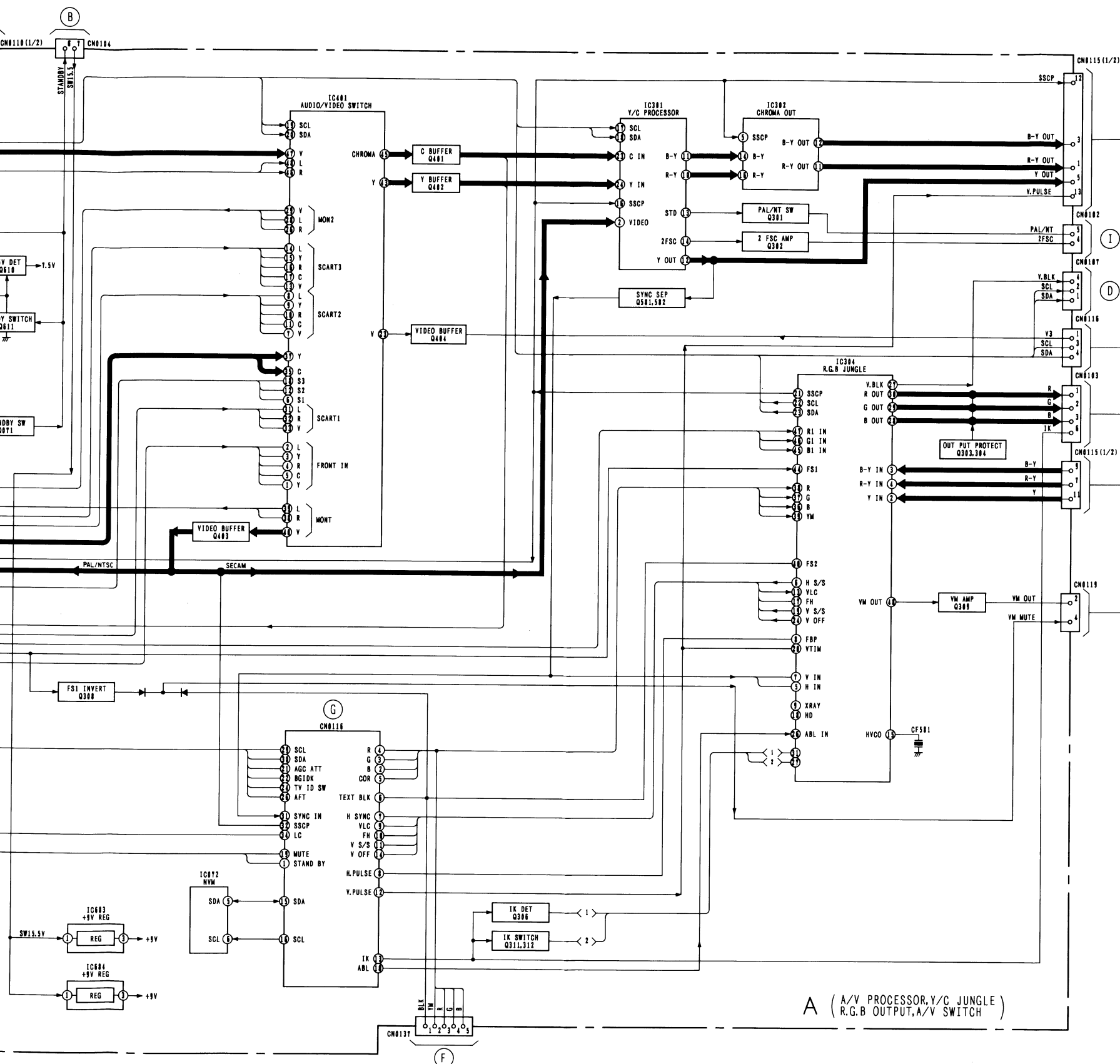
KV-S343

5-1. BLOCK DIAGRAM (1)

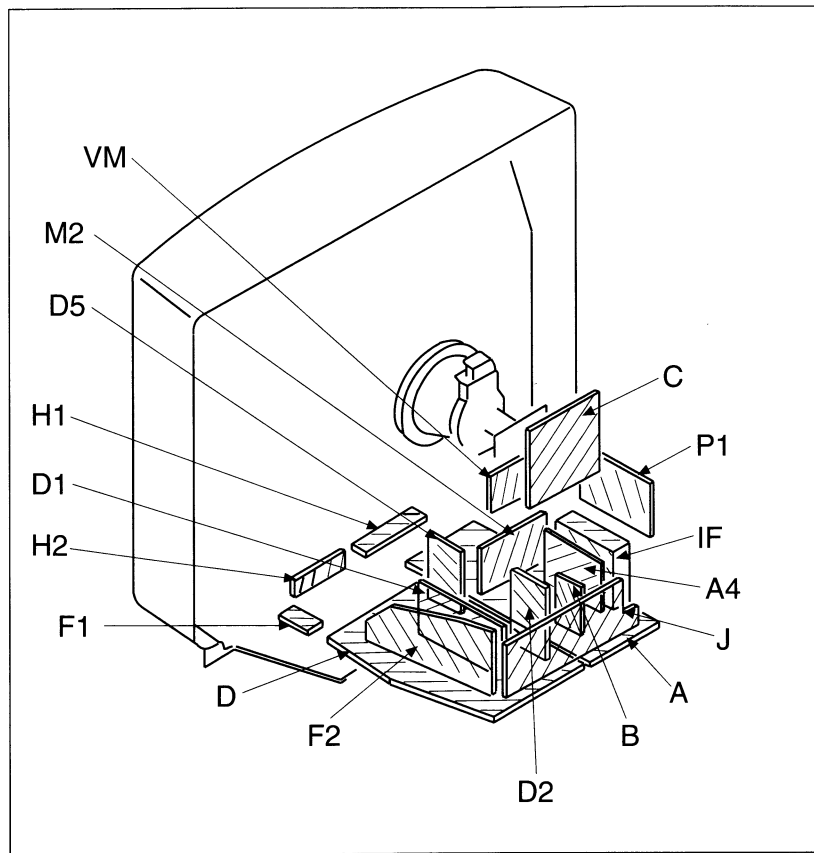










## 5-2. CIRCUIT BOARDS LOCATION



## Reference information

RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFLAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RS	: NONFLAMMABLE METAL OXIDE
	RB	: NONFLAMMABLE CEMENT
	RW	: NONFLAMMABLE WIREWOUND
	※	: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

**Note:** The components identified by shading and mark  are critical for safety. Replace only with part number specified.









**Note:** Les composants identifiés par une trame et par une marque  sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.

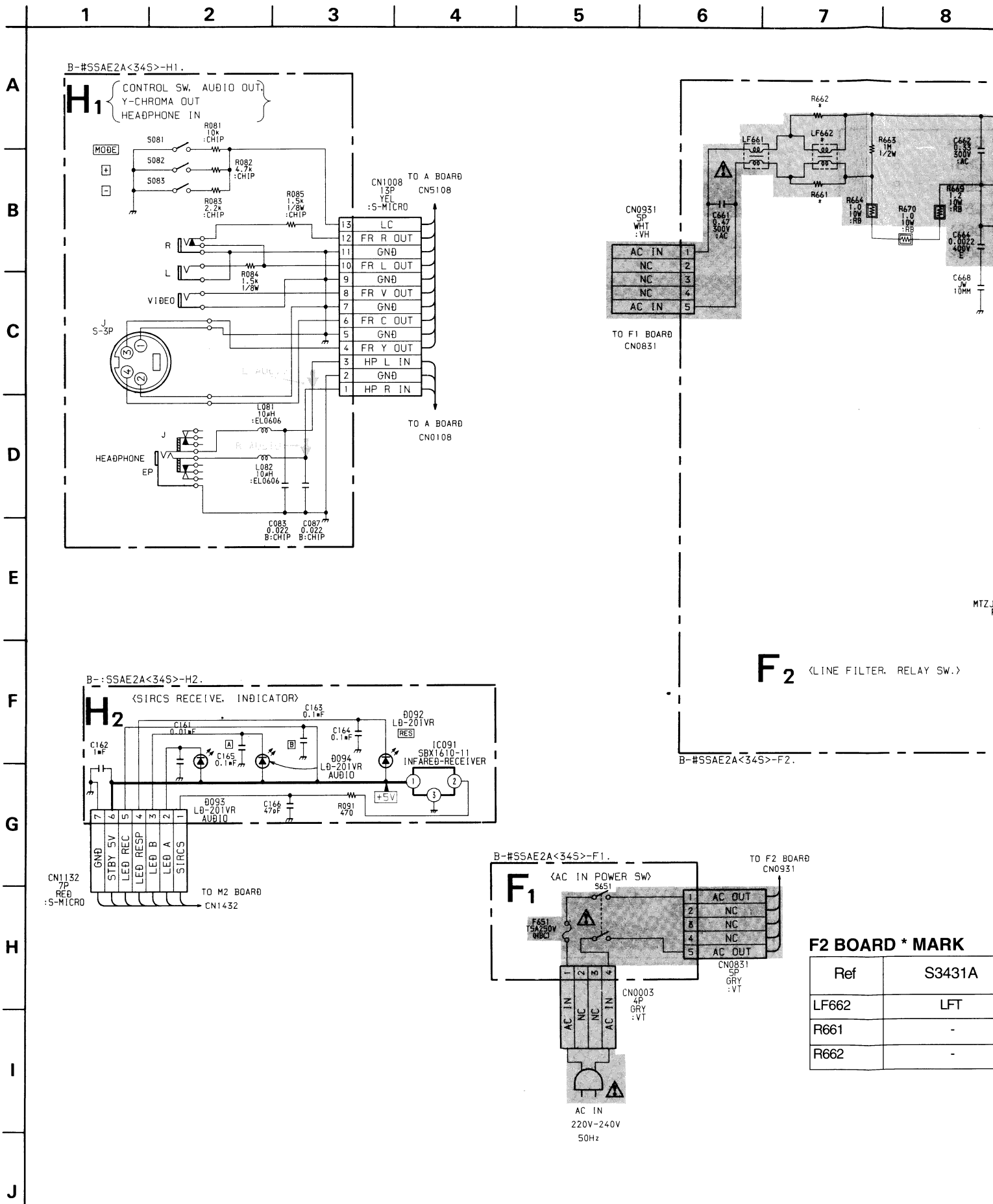
## 5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

## Note :

- All capacitors are in  $\mu F$  unless otherwise noted.  
pF :  $\mu \mu F$  50WV or less are not indicated except for electrolytic.
- Indication of resistance, which dose not have one for rating electrical power, is as follows.

Pitch : 5mm  
Rating electrical power : 1/4W

- Chip resistor is in 1/10W.
- All resistors are in ohms.  
 $k \Omega = 1000 \Omega$ ,  $M \Omega = 1000K \Omega$
-  : nonflammable resistor.
-  : fusible resistor.
- $\Delta$  : internal component.
-  : panel designation or adjustment for repair.
- All variable and adjustable resistors have charactristic curve B, unless otherwise noted.
- All voltages are in V.
- Readings are taken with a 10M  $\Omega$  digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
-  : B+ bus.
-  : B- bus.
-  : signal path.(RF)
-  : earth - ground
-  : earth - chassis

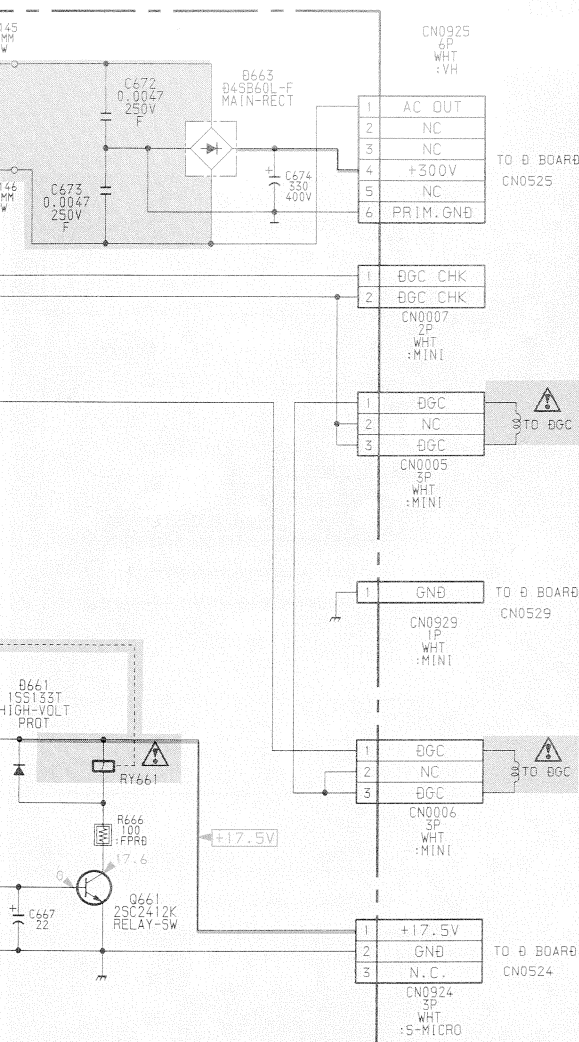


## F2 BOARD \* MARK

Ref	S3431A
LF662	LFT
R661	-
R662	-







S3431D	S3433E	S3431K	S3432U
LFT	-	-	-
-	JW 10MM	JW 10MM	JW 10MM
-	JW 10MM	JW 10MM	JW 10MM

## H1

CONTROL SW, AUDIO OUT  
Y - CHROMA OUT, HEADPHONE IN

## H2

SIRCS RECEIVER  
INDICATOR

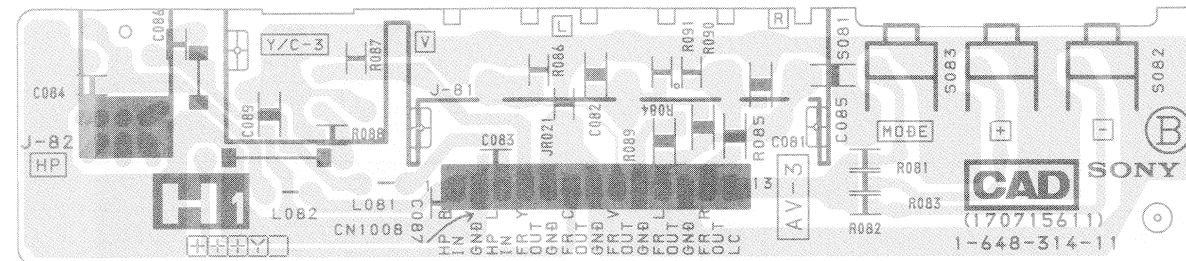
## F1

AC IN POWER SW.

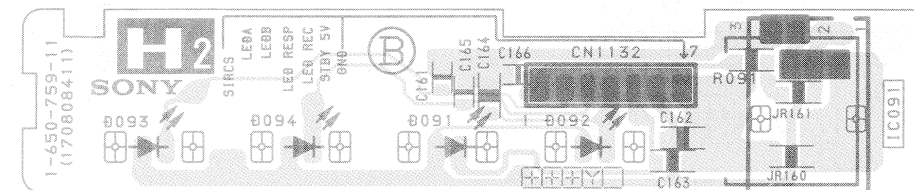
## F2

LINE FILTER  
RELAY SW.

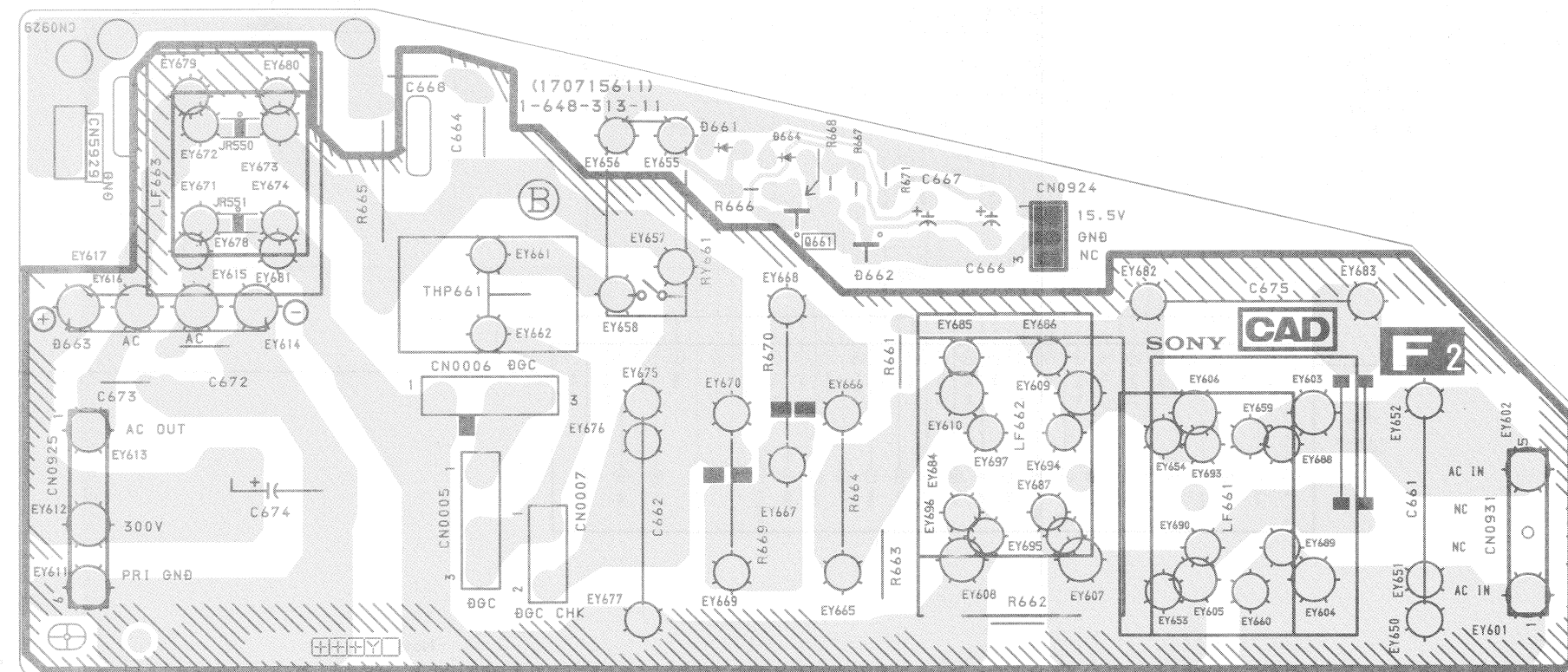
— H1 BOARD —



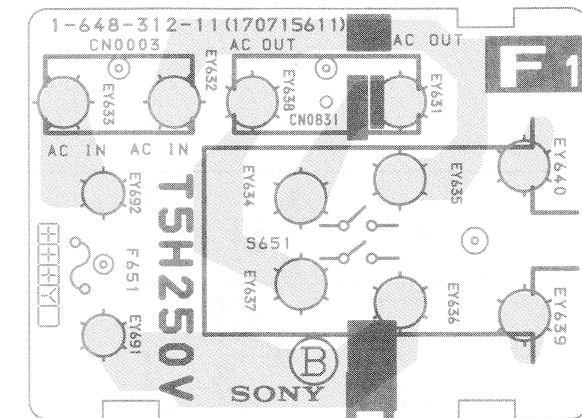
— H2 BOARD —



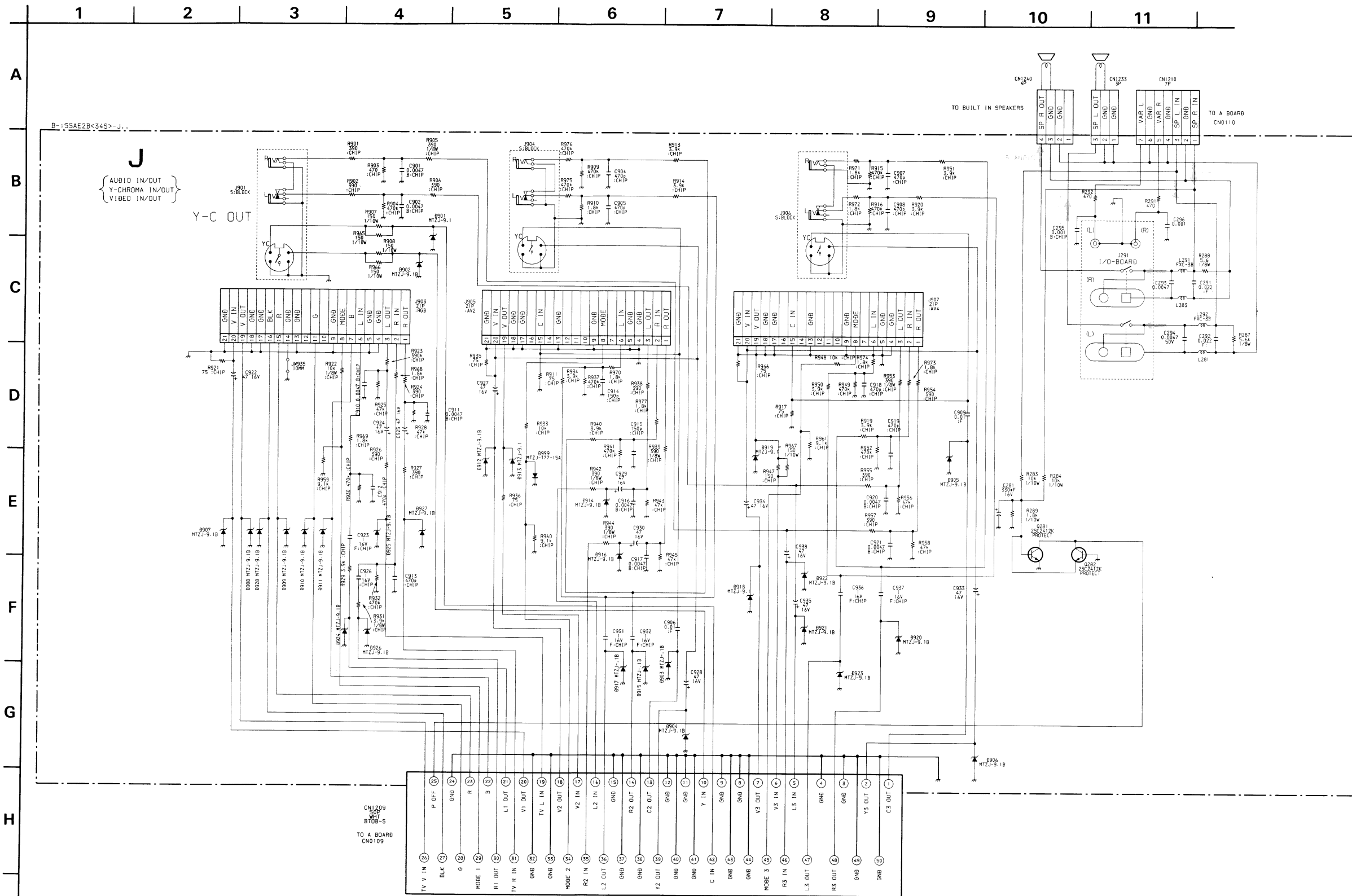
— F2 BOARD —





— F1 BOARD —



**A** TUNER AUDIO C  
AV SW, R.G.B. JU

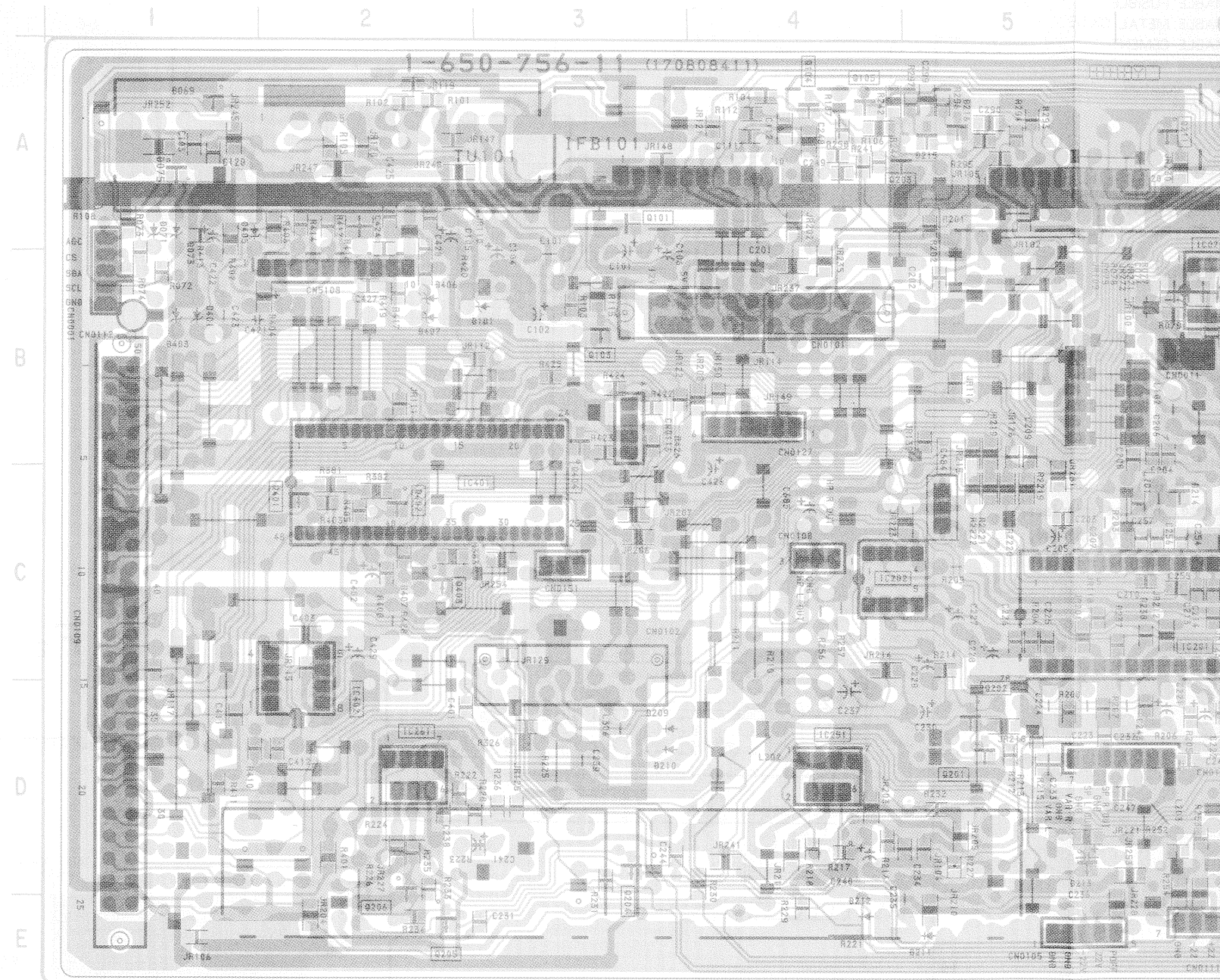


-  : Pattern from the side which enables seeing.
-  : Pattern of the rear side.



TUNER AUDIO CONTROL, AUDIO AMP  
AV SW, R.G.B. JUNGLE, Y/C PROCESSOR

— A BOARD —



IC		Q404	B-3
IC072	B-6	Q581	B-9
IC201	C-6	Q582	B-9
IC202	C-4	Q610	E-9
IC251	D-4	Q681	E-7
IC261	D-2	Q682	D-9
IC301	A-8		
IC302	A-10		
IC304	C-10		
IC401	C-2		
IC402	D-2		
IC681	D-9		
IC684	C-4		
IC685	E-8		
TRANSISTOR		DIODE	
Q071	D-8	D068	B-7
Q101	A-3	D069	A-1
Q102	A-7	D071	A-1
Q103	A-3	D073	A-1
Q201	D-5	D075	A-1
Q202	D-5	D077	B-7
Q203	A-4	D078	B-7
Q204	D-3	D079	B-7
Q205	E-2	D101	B-2
Q206	D-2	D206	D-7
Q207	B-6	D207	E-7
Q209	E-7	D208	D-7
Q210	A-6	D209	D-3
Q301	A-7	D210	D-3
Q302	B-7	D211	E-5
Q303	D-10	D212	E-4
Q304	D-10	D213	D-5
Q305	A-8	D214	C-6
Q306	D-10	D301	B-9
Q308	C-9	D302	A-9
Q309	C-9	D304	B-10
Q311	C-8	D305	C-9
Q312	C-8	D306	D-10
Q313	B-8	D307	D-10
Q314	C-7	D308	D-10
Q315	D-7	D311	C-9
Q401	C-2	D312	C-8
Q402	C-2	D313	C-7
Q403	C-2	D381	C-8
		D401	B-1
		D403	B-1
		D405	A-1
		D406	B-2
		D407	B-2
		D571	B-9
		D681	E-8
		D683	D-9

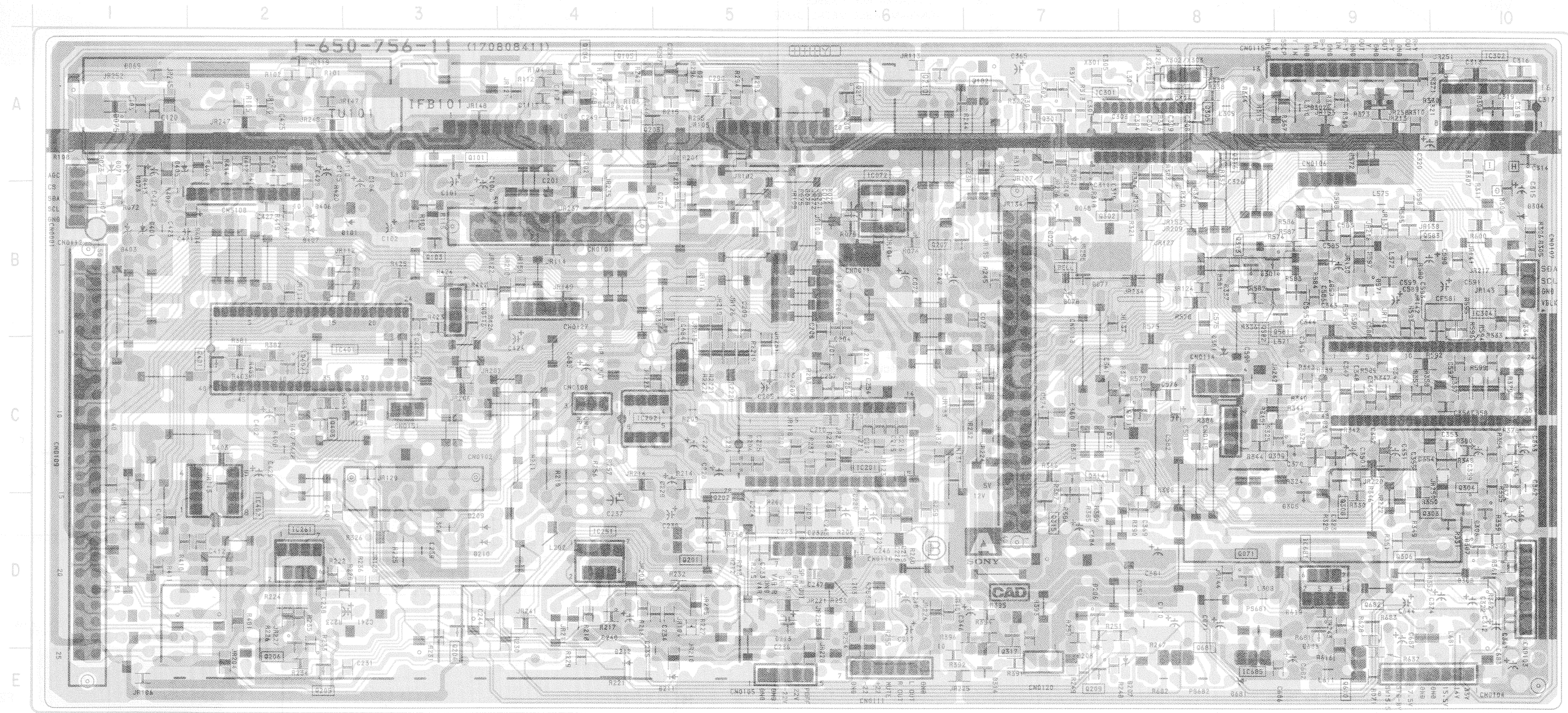


## - A BOARD -

Q404	B-3
Q581	B-9
Q582	B-9
Q610	E-9
Q681	E-7
Q682	D-9

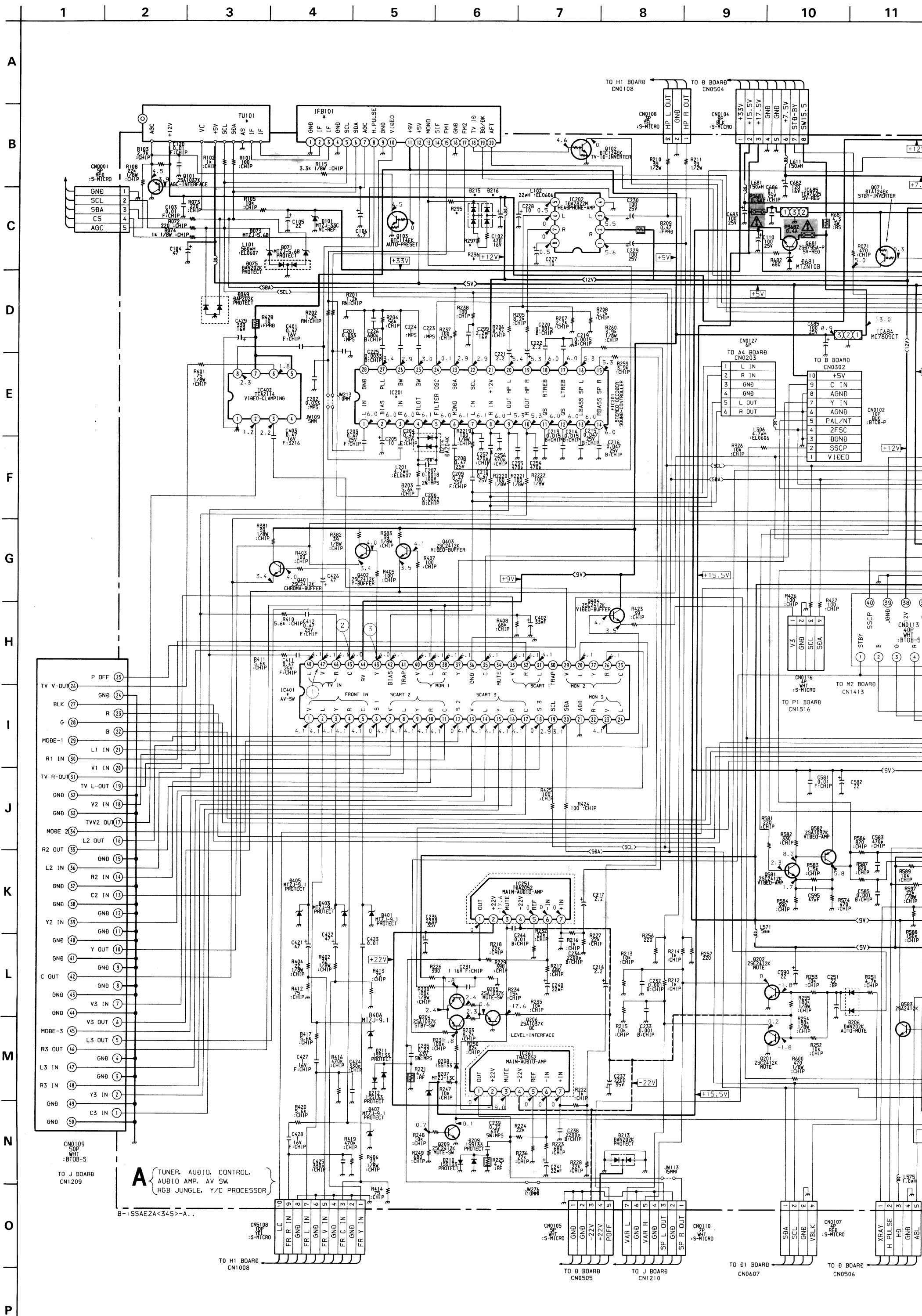
## DIODE

D068	B-7
D069	A-1
D071	A-1
D073	A-1
D075	A-1
D077	B-7
D078	B-7
D079	B-7
D101	B-2
D206	D-7
D207	E-7
D208	D-7
D209	D-3
D210	D-3
D211	E-5
D212	E-4
D213	D-5
D214	C-6
D301	B-9
D302	A-9
D304	B-10
D305	C-9
D306	D-10
D307	D-10
D308	D-10
D311	C-9
D312	C-8
D313	C-7
D381	C-8
D401	B-1
D403	B-1
D405	A-1
D406	B-2
D407	B-2
D571	B-9
D681	E-8
D683	D-9



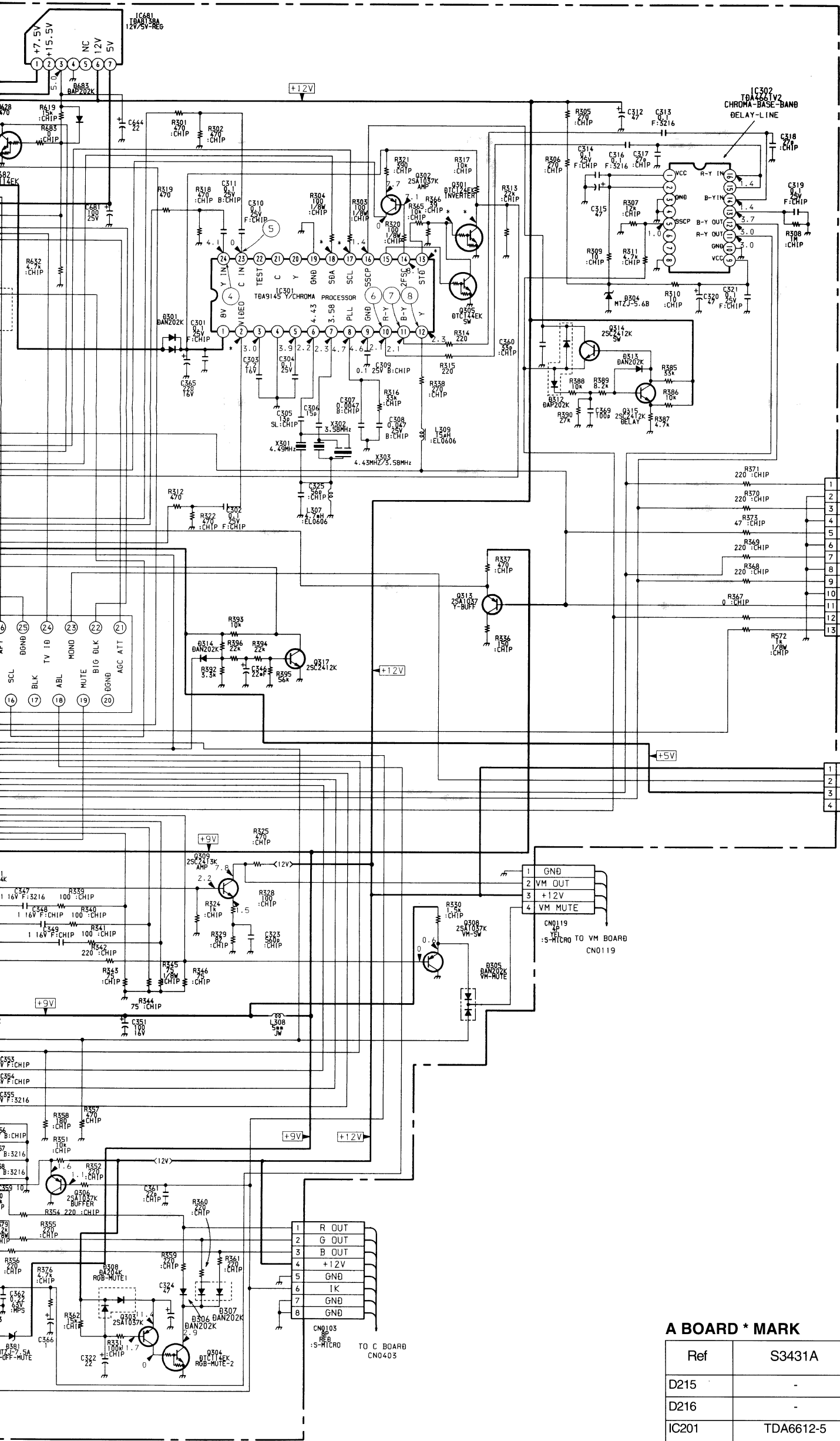
Note:

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

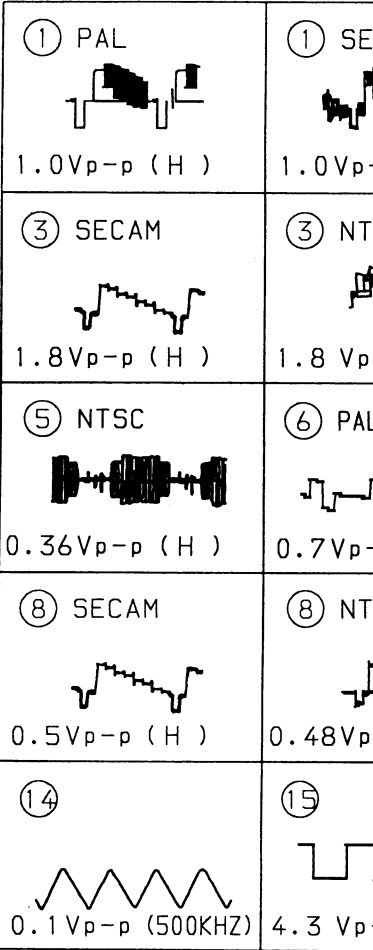




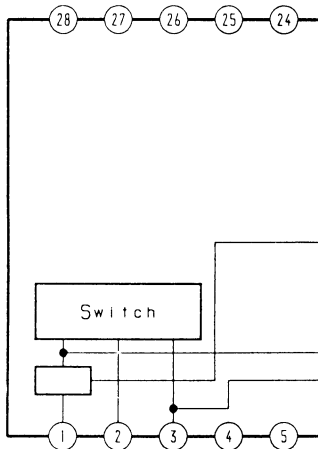




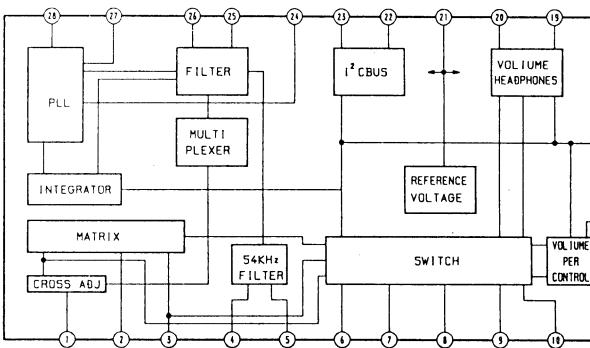
WAVEFORMS A BOARD



A BOARD IC201 TDA662



A BOARD IC201 TDA6612-5



Voltages indicated with the mark ※ on the schematic diagram are shown in the table below.

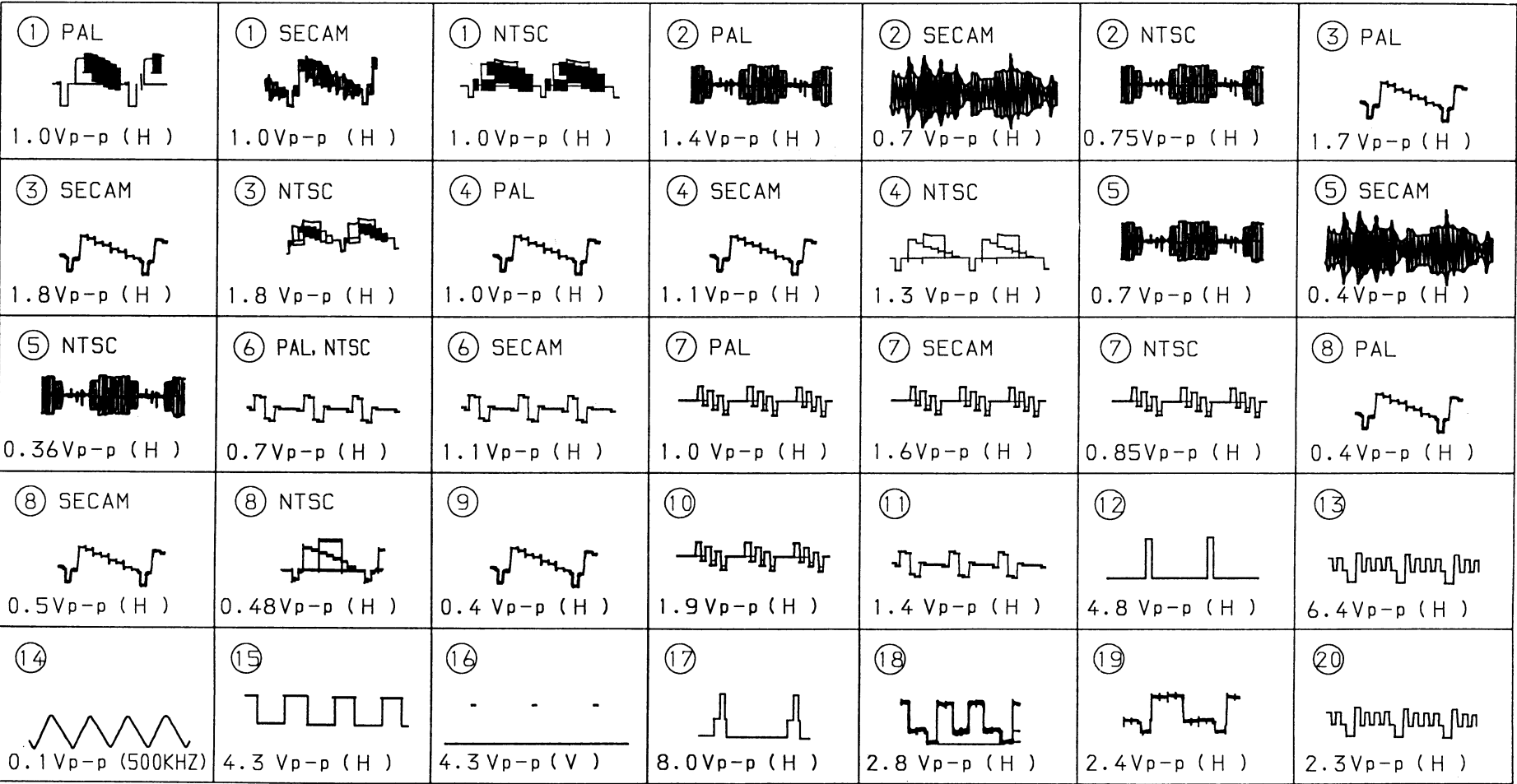
A BOARD

	PAL	SECAM	NTSC4.43	NTSC3.58
IC301 ②	4.0	4.0	4.0	4.8
⑬	0	0	4.9	4.9
⑰	3.1	2.8	2.5	2.5
⑱	3.1	3.1	2.8	2.8
Q301 (B)	0	0	1.6	1.6
(C)	4.4	4.4	0.1	0.1

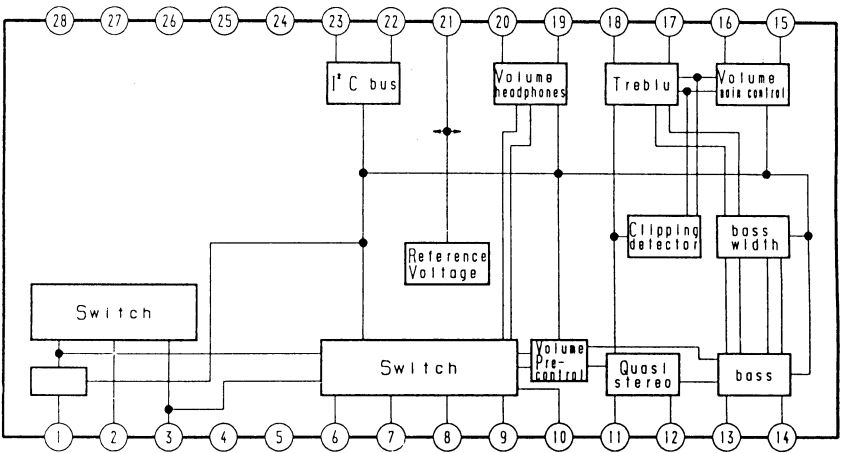
A BOARD \* MARK

Ref	S3431A	S3431B	S3431D	S3433E	S343
D215	-	DAN202K	-	-	-
D216	-	DAN202K	-	-	-
IC201	TDA6612-5	TDA6612-5	TDA6612-5	TDA6612-5	TDA6612-5
IC401	CXA1855S	CXA1545AS	CXA1855S	CXA1855S	CXA1855S
IFB101	IFH-389	IFH-389F	IFH-389	IFH-389	IFH-389
R296	-	330	-	-	-
R297	-	120	-	-	-
TU101	BTP-EC411	BTP-EC411	BTP-EC411	BTP-EC411	BTP-EC411

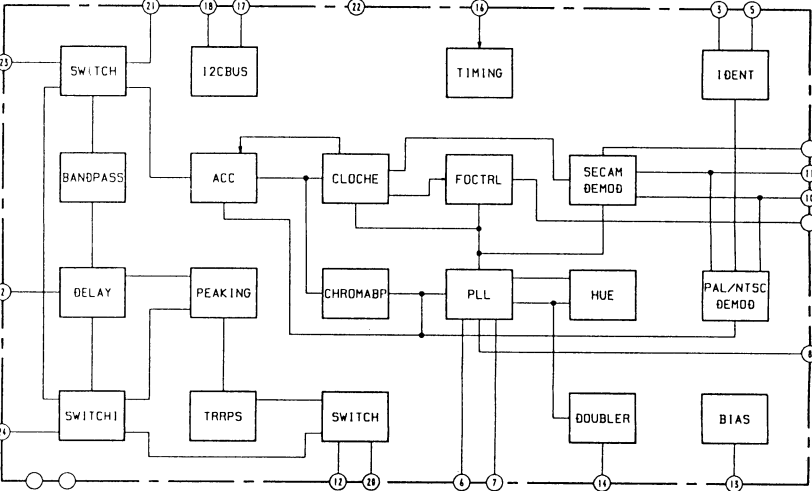
WAVEFORMS A BOARD



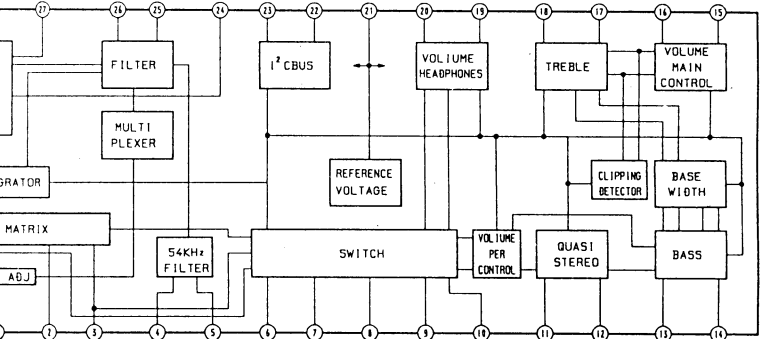
A BOARD IC201 TDA6622-5 (UK Model only)



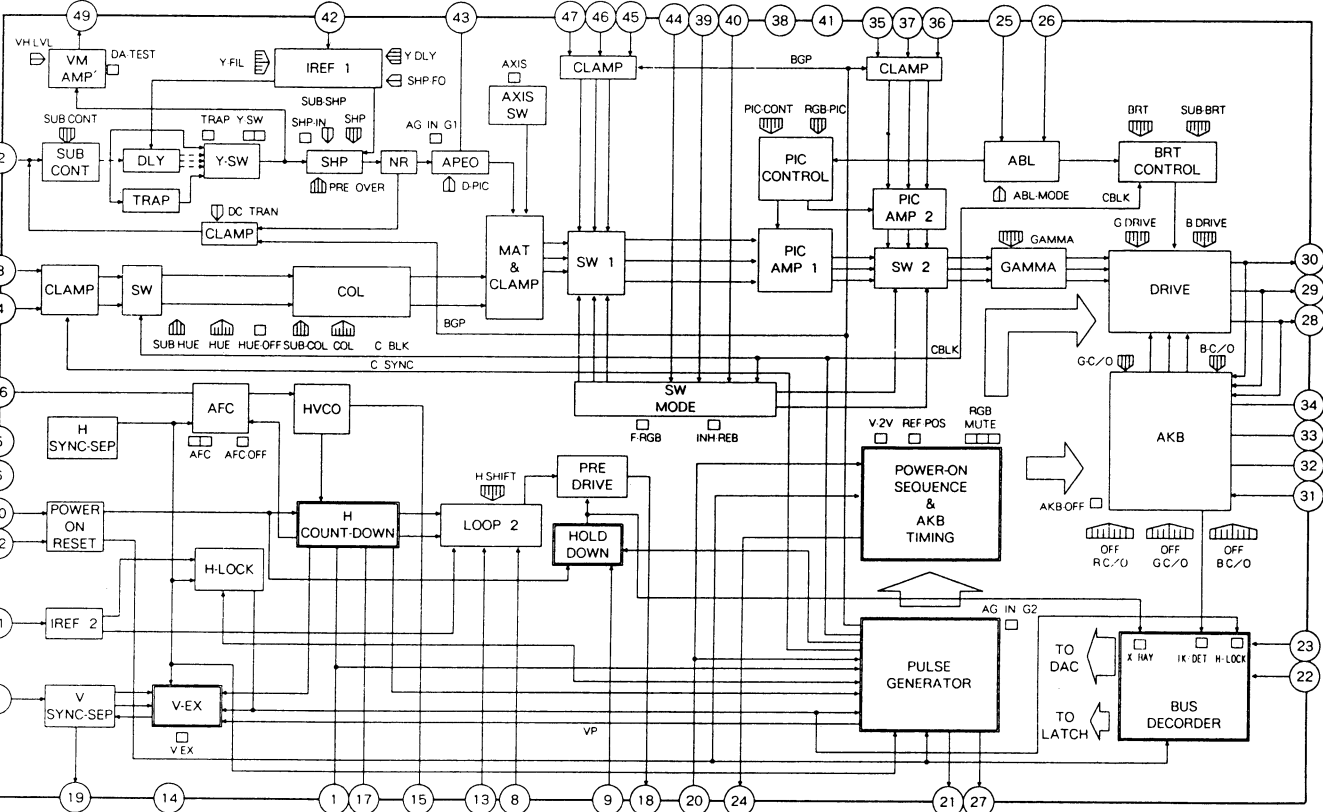
A BOARD IC301 TDA9145/N2B



ARD IC201 TDA6612-5



A BOARD IC304 CXA1587S

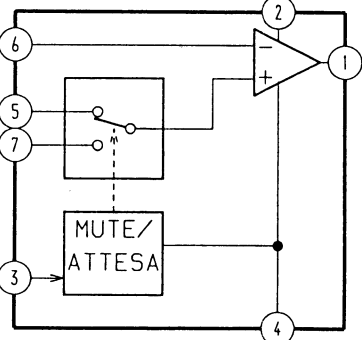


ages indicated with the mark ※  
e schematic diagram are shown  
e table below.

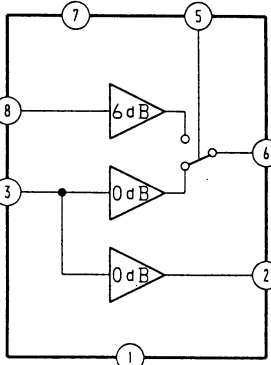
ARD

	PAL	SECAM	NTSC4.43	NTSC3.58
②	4.0	4.0	4.0	4.8
⑬	0	0	4.9	4.9
⑰	3.1	2.8	2.5	2.5
⑱	3.1	3.1	2.8	2.8
(B)	0	0	1.6	1.6
(C)	4.4	4.4	0.1	0.1

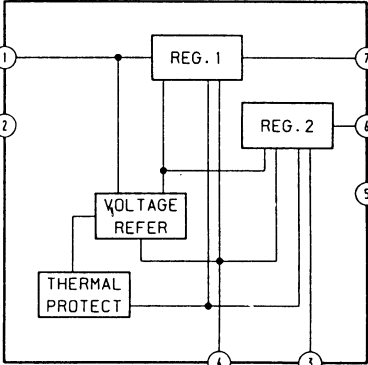
A BOARD IC251/261 TDA2052



A BOARD IC402 TEA2114



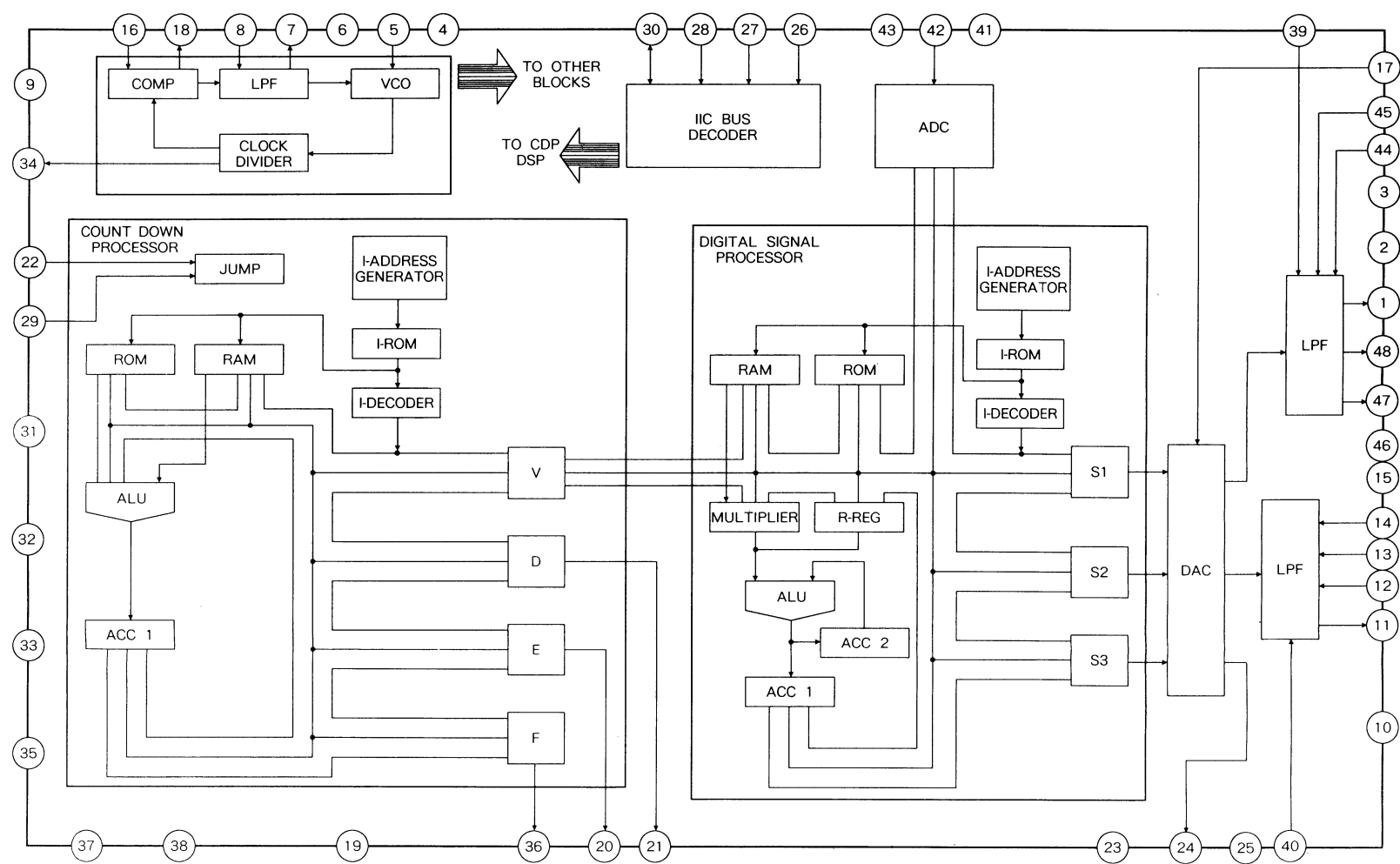
A BOARD IC681 TDA8138A

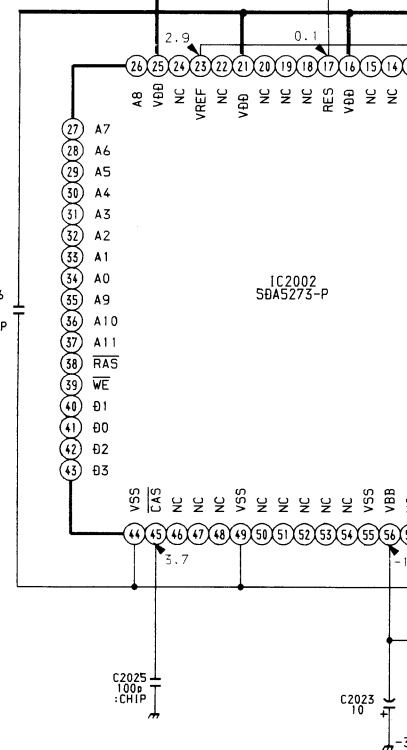
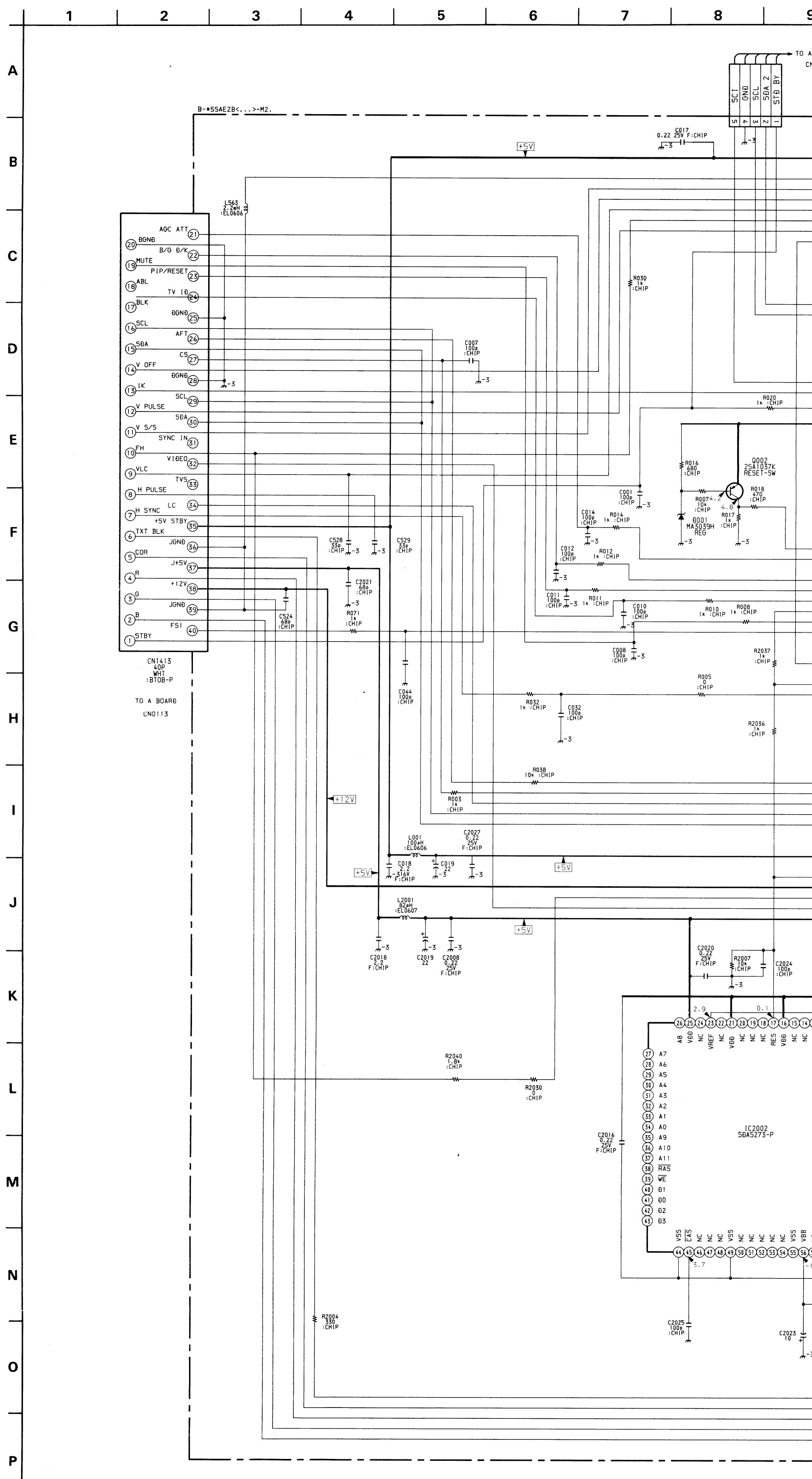


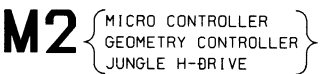
S3431D	S3433E	S3431K	S3432U
-	-	-	-
TDA6612-5	TDA6612-5	TDA6612-5	TDA6622-5
CXA1855S	CXA1855S	CXA1855S	CXA1855S
IFH-389	IFH-389	IFH-389	IFH-395
-	-	-	-
BTP-EC411	BTP-EC411	BTP-EC411	U944C



M2 BOARD IC561 CXD2018Q







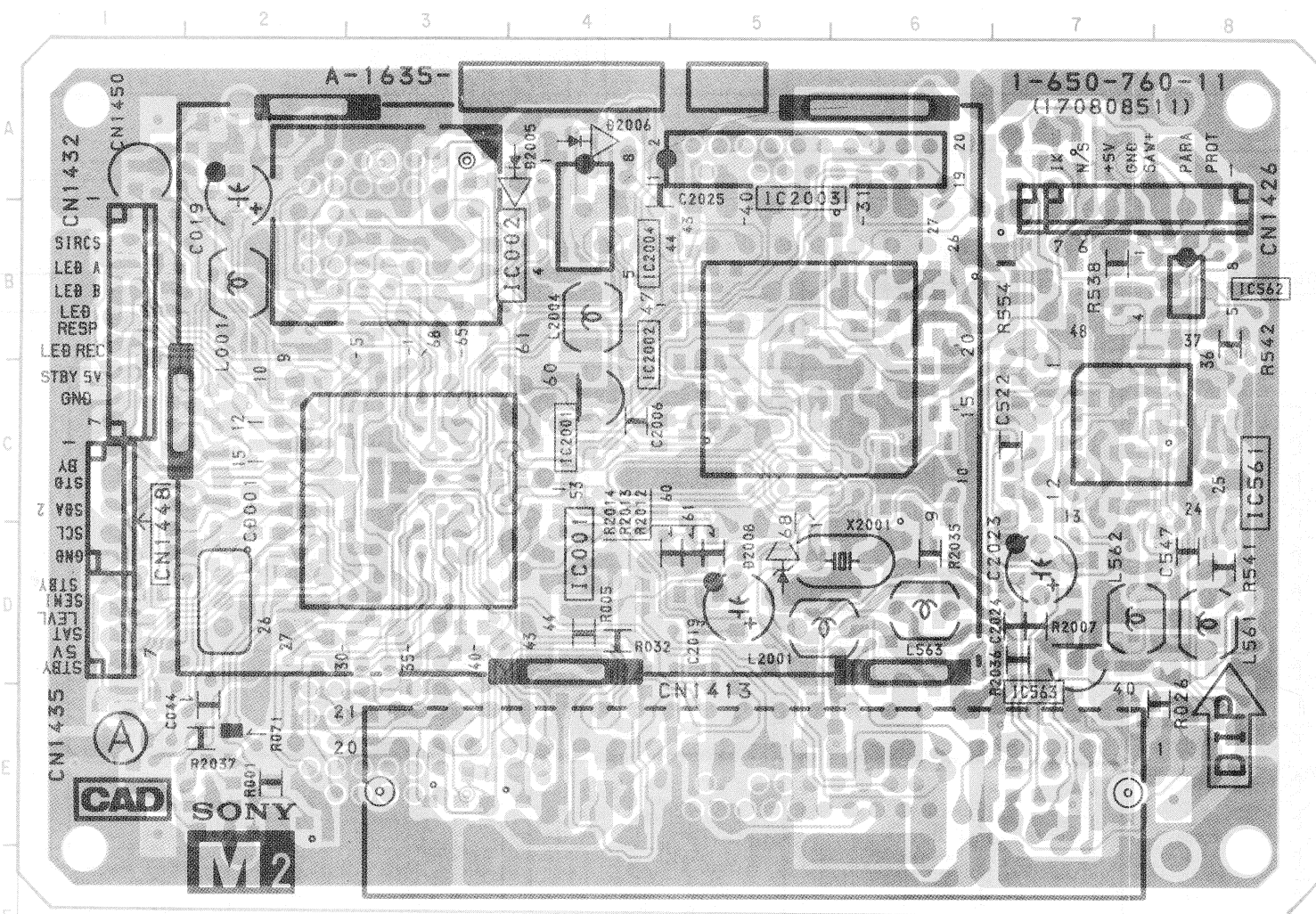
M2

MICRO CONTROLLER,  
GEOMETRY CONTROLLER,  
JUNGLE, H - DRIVE

D

H/V OUT, PIN OUT,  
POWER SUPPLY

- M2 BOARD -



## IC

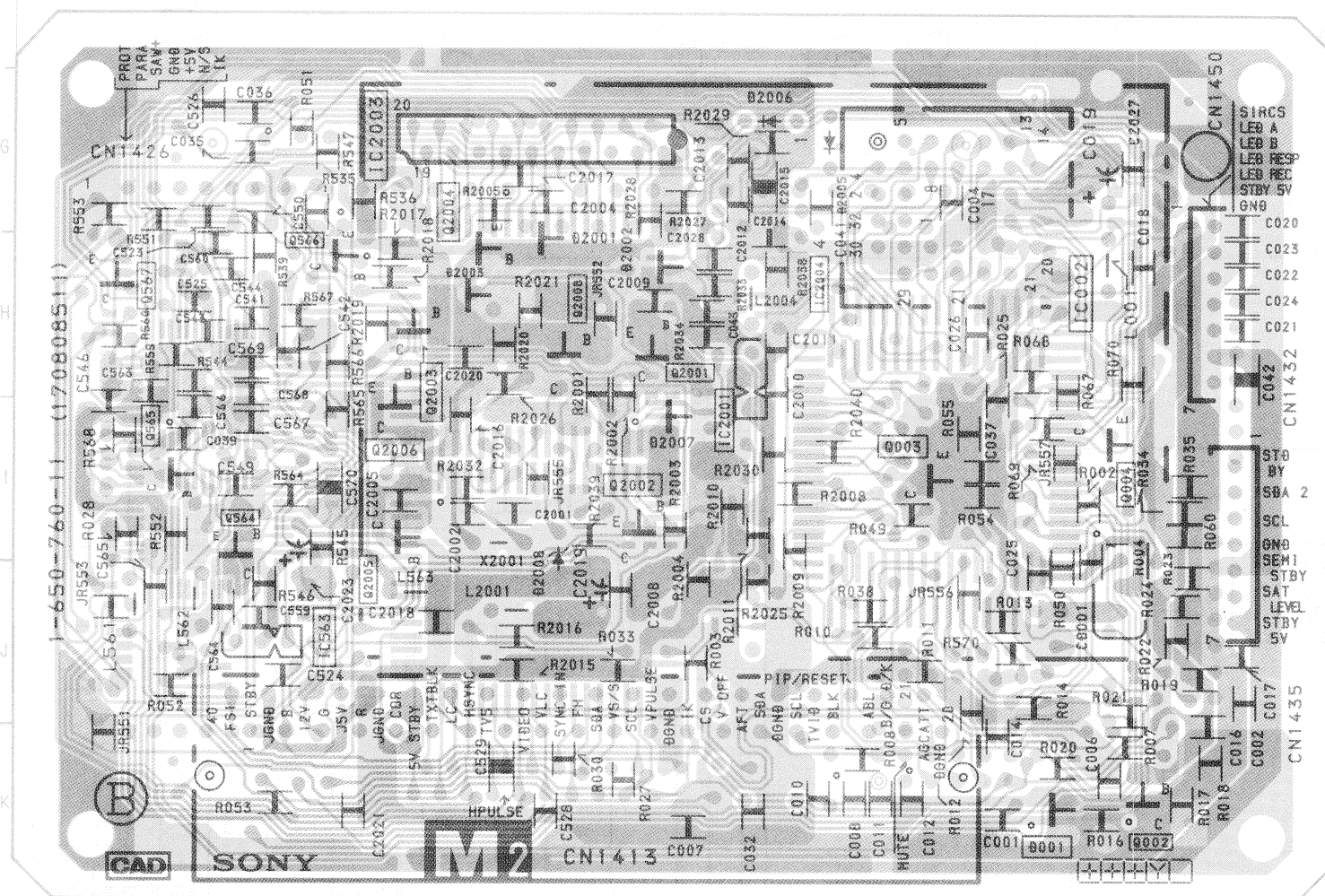
IC001	C - 4
IC002	B - 3, H - 7
IC561	C - 8
IC562	B - 8
IC563	D - 7, J - 3
IC2001	C - 4, I - 5
IC2002	C - 5
IC2003	B - 5, G - 3
IC2004	B - 4, H - 5

## TRANSISTOR

Q002	K - 7
Q003	I - 6
Q564	I - 2
Q565	I - 1
Q566	G - 2
Q567	H - 1
Q2001	H - 5
Q2002	I - 4
Q2003	H - 3
Q2005	J - 3
Q2006	I - 3
Q2008	H - 4

## DIODE

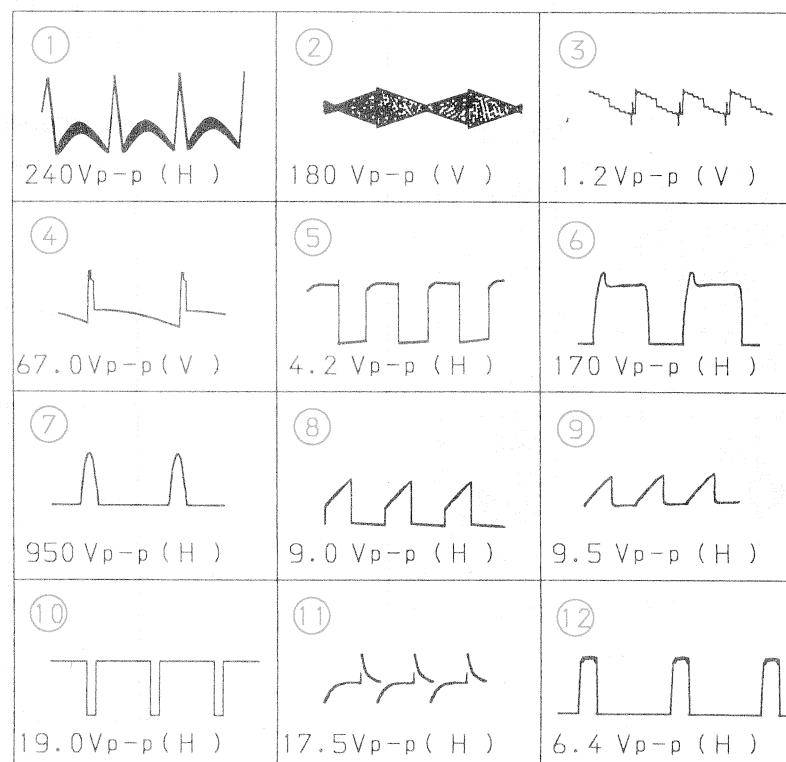
D001	K - 7
D2001	G - 4
D2002	H - 4
D2003	H - 3



Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

## WAVEFORMS D BOARD





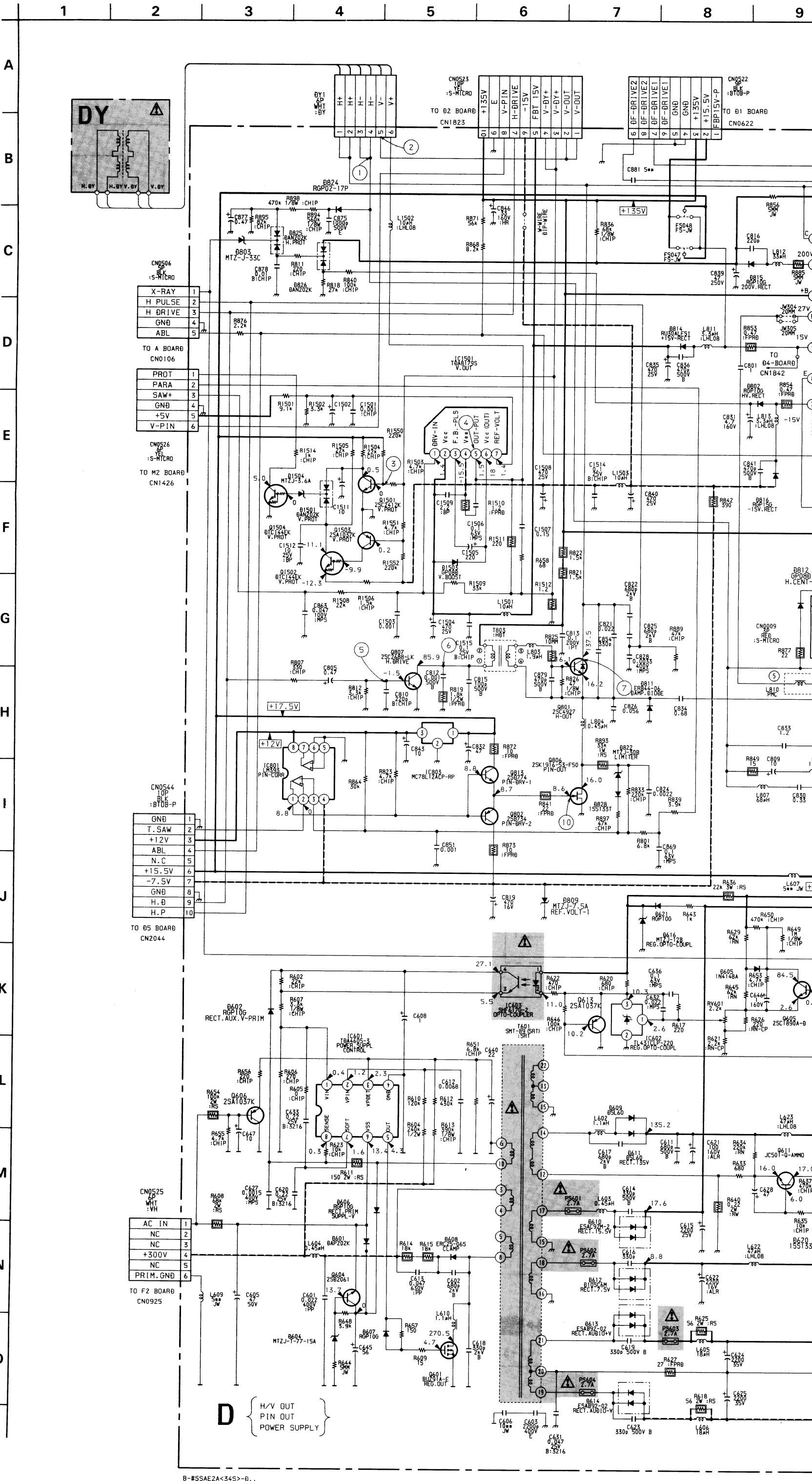
IC	
IC001	C - 4
IC002	B - 3, H - 7
IC561	C - 8
IC562	B - 8
IC563	D - 7, J - 3
IC2001	C - 4, I - 5
IC2002	C - 5
IC2003	B - 5, G - 3
IC2004	B - 4, H - 5

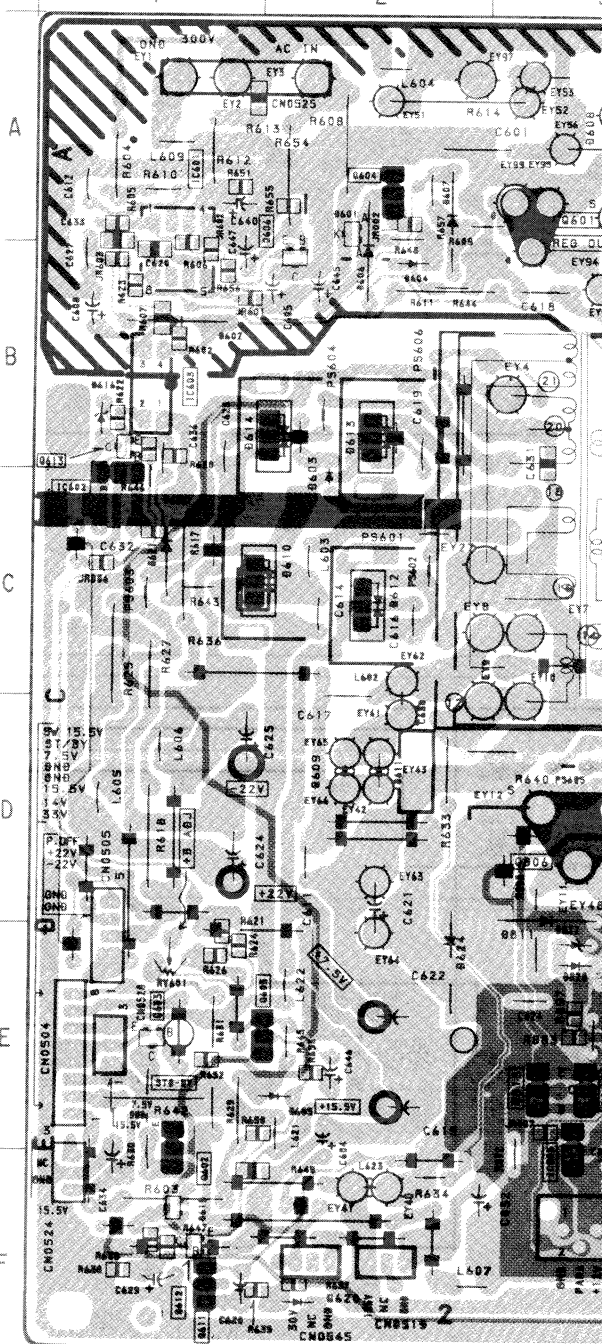
  

TRANSISTOR	
Q002	K - 7
Q003	I - 6
Q564	I - 2
Q565	I - 1
Q566	G - 2
Q567	H - 1
Q2001	H - 5
Q2002	I - 4
Q2003	H - 3
Q2005	J - 3
Q2006	I - 3
Q2008	H - 4

DIODE	
D001	K - 7
D2001	G - 4
D2002	H - 4
D2003	H - 3





The circuit indicated as left of the 600 Vp-p. Care must be paid to inspection or repairing.



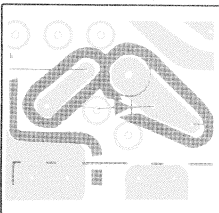
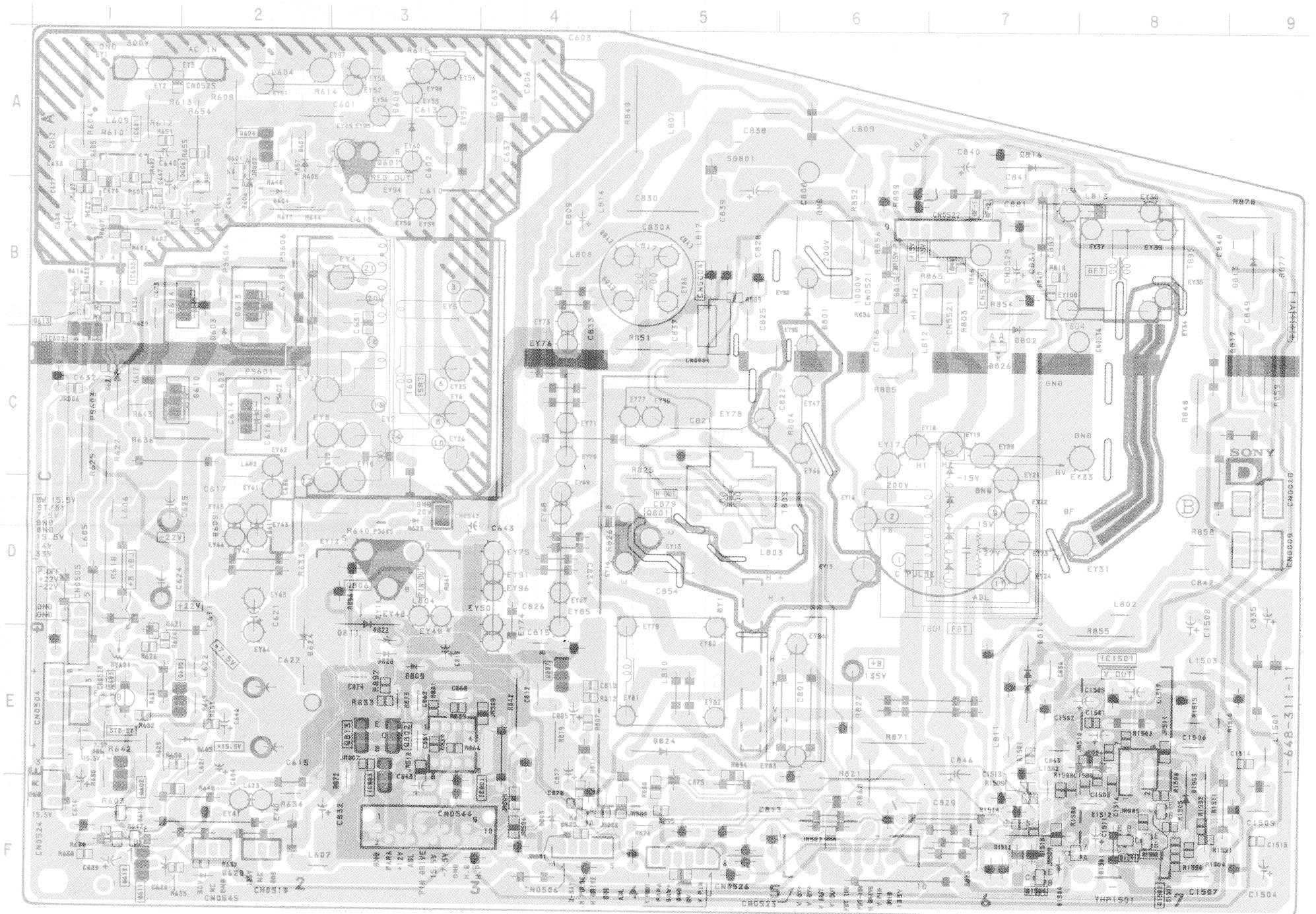
The block diagram illustrates the control system for the power supply. It includes the following components and connections:

- REFERENCE VOLTAGE TYP. 3V**: Provides a reference voltage  $V_{ref}$  to the **SUPPLY VOLTAGE MONITOR**.
- SUPPLY VOLTAGE MONITOR**: Receives feedback signals  $V_{Gmin}$ ,  $V_{GA}$ ,  $V_{GE}$ , and  $V_{GMAX}$  from the **LOW VOLTAGE PROTECTION** block. It outputs control signals  $V_{2B}$  and  $V_{ST}$  to the **PRIMARY CURRENT REPRODUCER** and **STARTING IMPULSE GENERATOR**, respectively.
- CURRENT SOURCE**: Receives a control signal from the **REGULATING & OVERLOAD AMPLIFIER** and provides current to the **OVERLOAD POINT CORRECTION** block.
- REGULATING & OVERLOAD AMPLIFIER**: Receives feedback signals  $V_R$  (from the **CURRENT SOURCE**) and  $V_Y$  (from the **LOW VOLTAGE PROTECTION** block). It outputs control signals to the **PRIMARY CURRENT REPRODUCER**, **STARTING IMPULSE GENERATOR**, **STOP COMPARATOR**, and **LOW VOLTAGE PROTECTION**.
- OVERLOAD POINT CORRECTION**: Receives current from the **CURRENT SOURCE** and provides a feedback signal  $V_Y$  to the **LOW VOLTAGE PROTECTION** block.
- LOW VOLTAGE PROTECTION**: Receives feedback signals from the **REGULATING & OVERLOAD AMPLIFIER** and the **OVERLOAD POINT CORRECTION** block. It outputs control signals to the **REGULATING & OVERLOAD AMPLIFIER** and the **STOP COMPARATOR**.
- PRIMARY CURRENT REPRODUCER**: Receives control signals  $V_{2B}$  and  $V_{ST}$  from the **SUPPLY VOLTAGE MONITOR** and the **REGULATING & OVERLOAD AMPLIFIER**.
- STARTING IMPULSE GENERATOR**: Receives control signals  $V_{ST}$  from the **SUPPLY VOLTAGE MONITOR** and the **REGULATING & OVERLOAD AMPLIFIER**.
- STOP COMPARATOR**: Receives control signals from the **REGULATING & OVERLOAD AMPLIFIER** and the **LOW VOLTAGE PROTECTION** block.

- D BOARD -

Note :

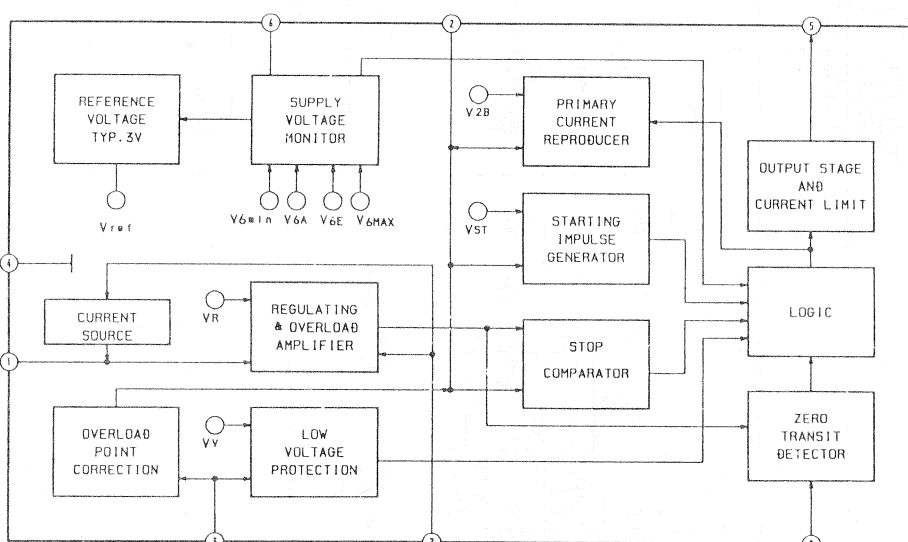
- : Pattern from the side which enables seeing.
- : Pattern of the rear side.



NOTE:

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

D BOARD IC601 TDA4605-3



IC		D607	A - 2
IC601	A - 1	D608	A - 3
IC602	C - 1	D610	C - 2
IC603	B - 1	D611	D - 2
IC801	E - 3	D612	C - 2
IC803	F - 3	D613	B - 2
IC1501	E - 8	D614	B - 2
TRANSISTOR		D616	B - 1
		D619	F - 1
		D620	F - 2
		D621	C - 1
		D624	E - 2
		D801	B - 6
		D802	B - 7
		D803	F - 4
		D809	E - 3
		D811	D - 3
		D812	C - 9
		D813	B - 9
		D814	E - 7
		D815	B - 6
		D816	A - 7
		D822	E - 3
		D824	E - 5
		D825	F - 4
		D826	C - 7
		D828	E - 3
		D1501	F - 8
		D1503	F - 8
		D1504	F - 7
DIODE		VARIABLE RESISTOR	
D601	A - 2		
D602	B - 1	RV601	E - 1
D604	B - 2		
D605	E - 2		
D606	B - 2		



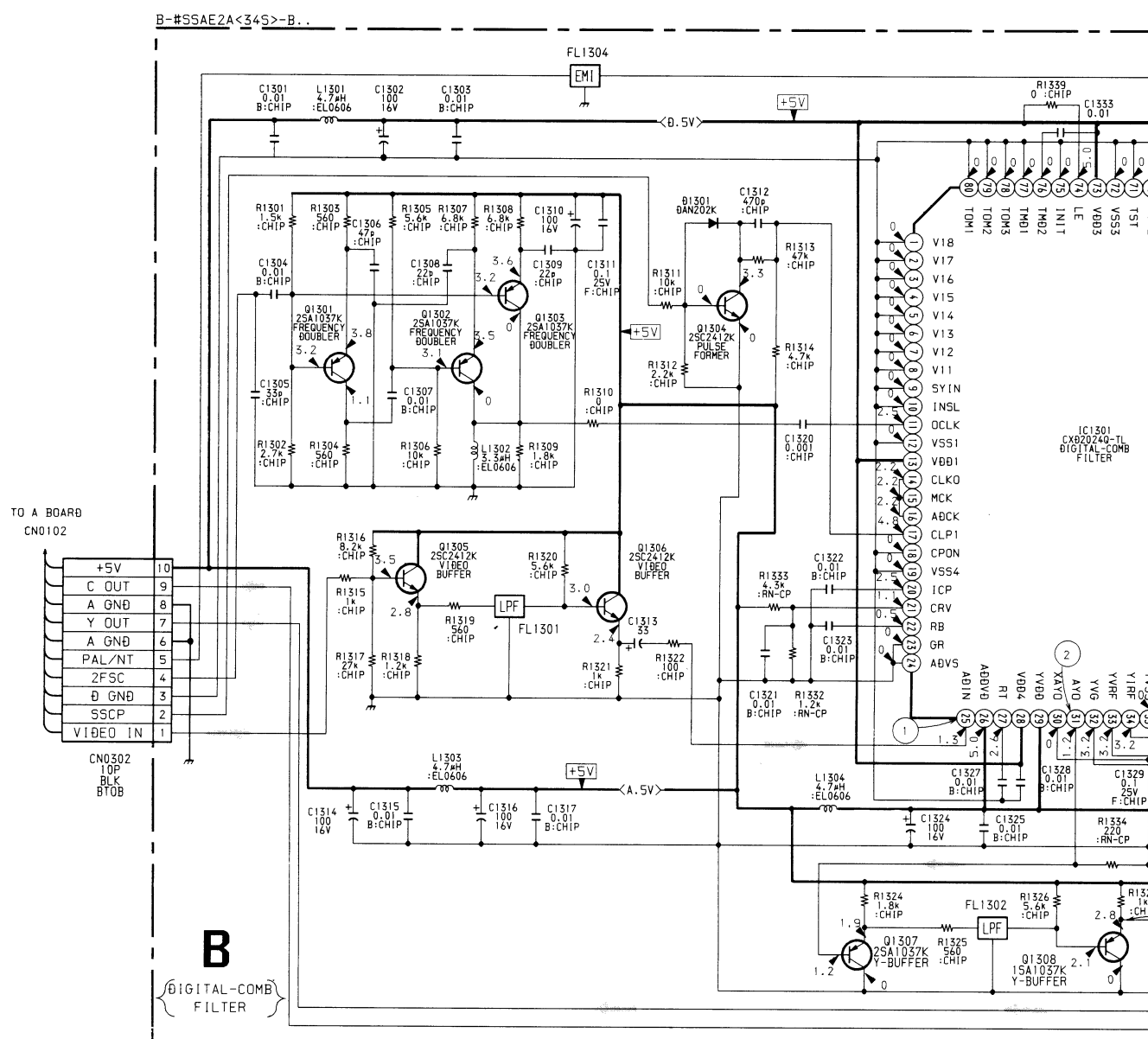
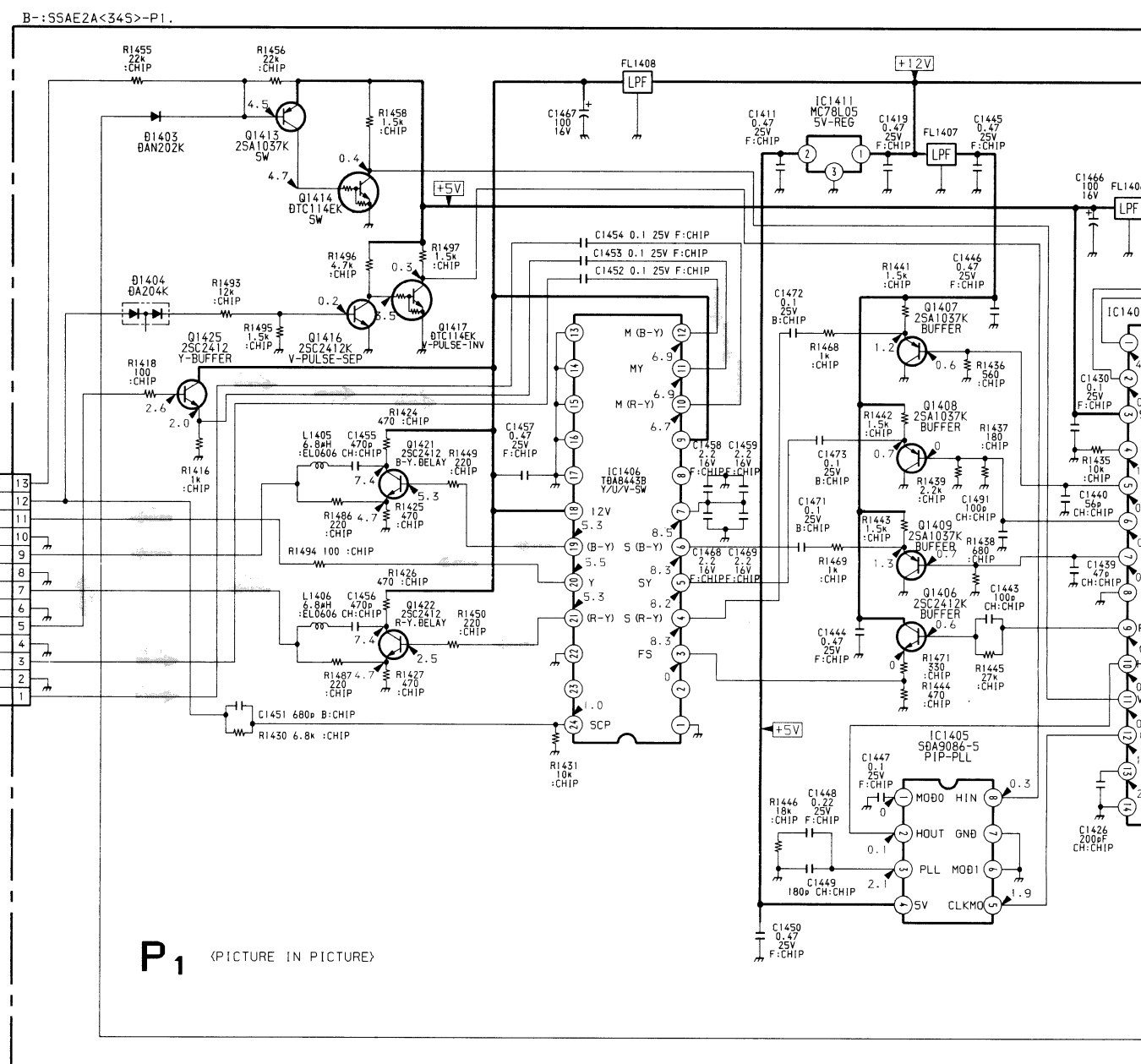
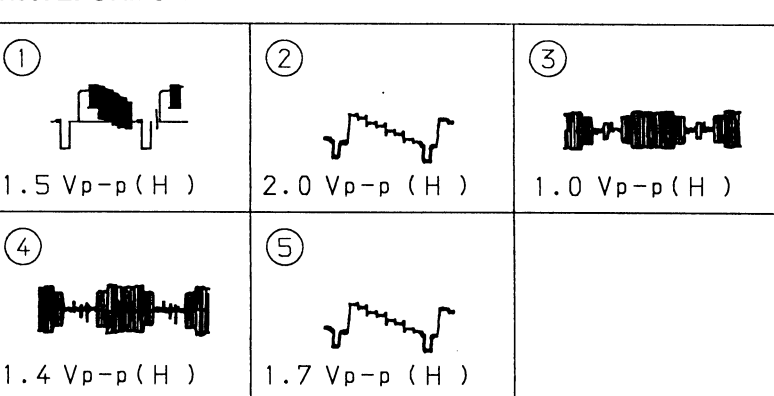


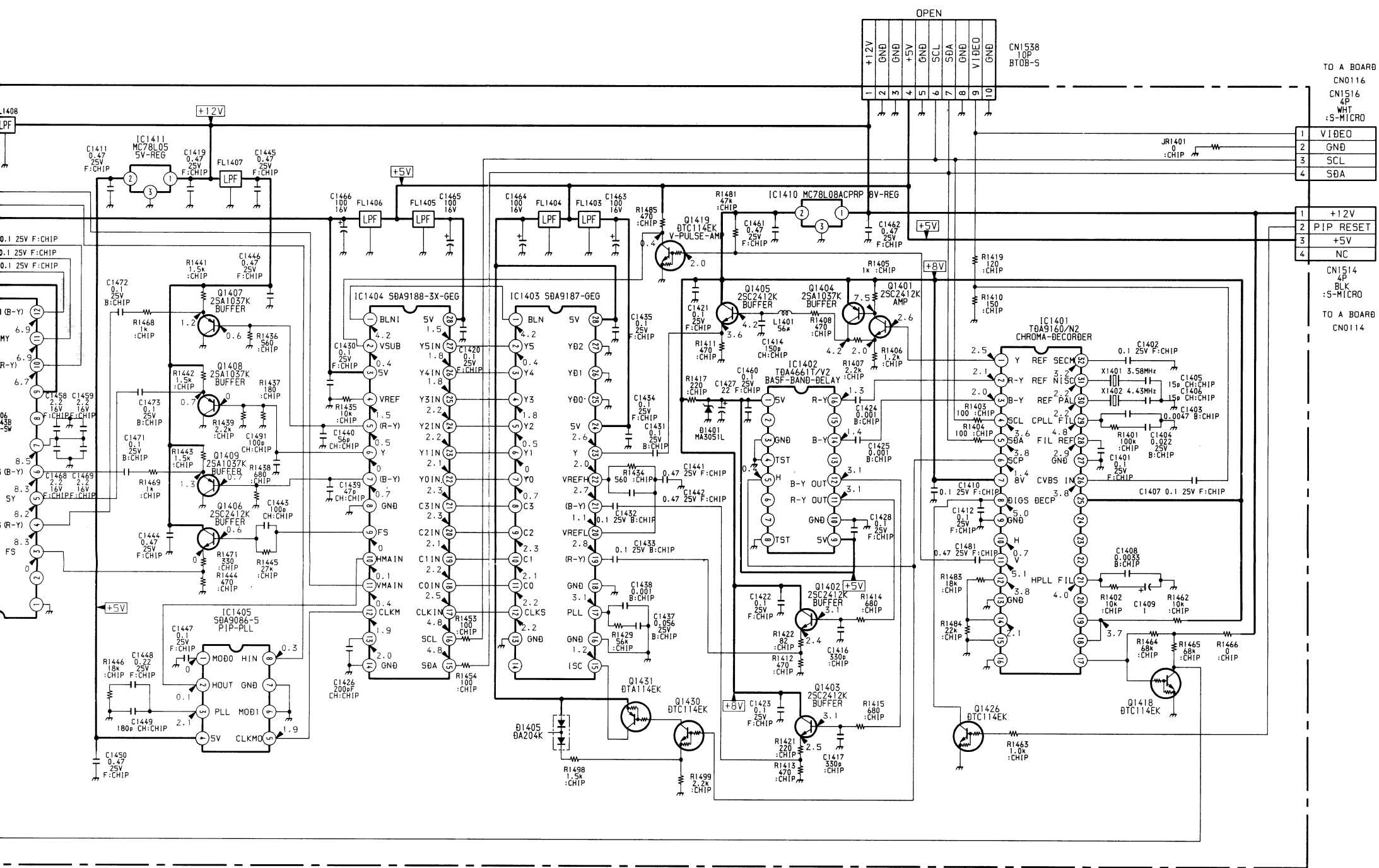


**A4 BOARD \* MARK**

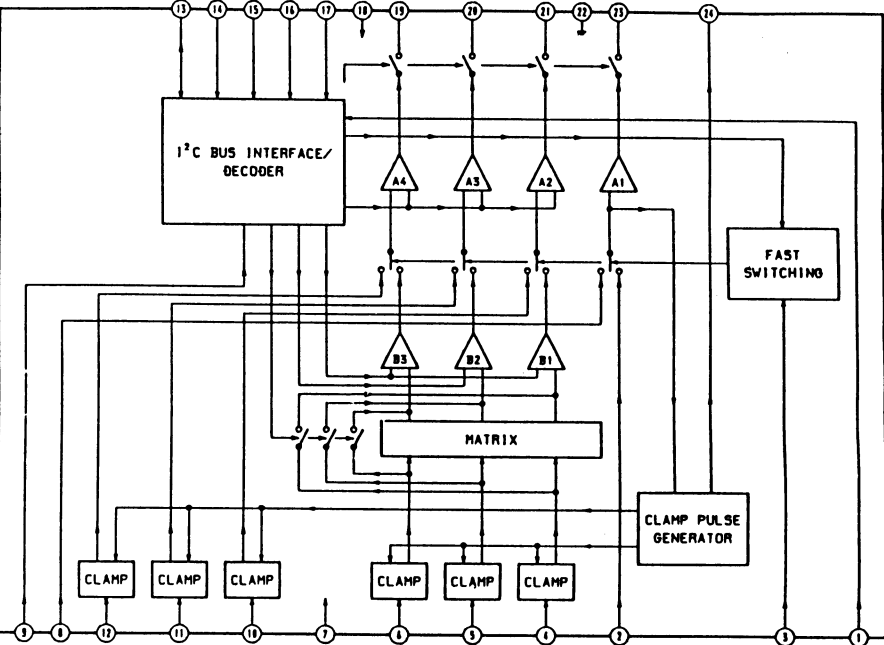
Ref	S3433E	S3432U
BP1101	5.850MHz	6.552MHz
C1159	-	47PF
CF1101	-	6.0MHz
CF1102	5.5MHz	-
JR1101	0 : CHIP	-
L1105	-	15UH
K1102	11.700MHz	13.104MHz

## WAVEFORMS B BOARD

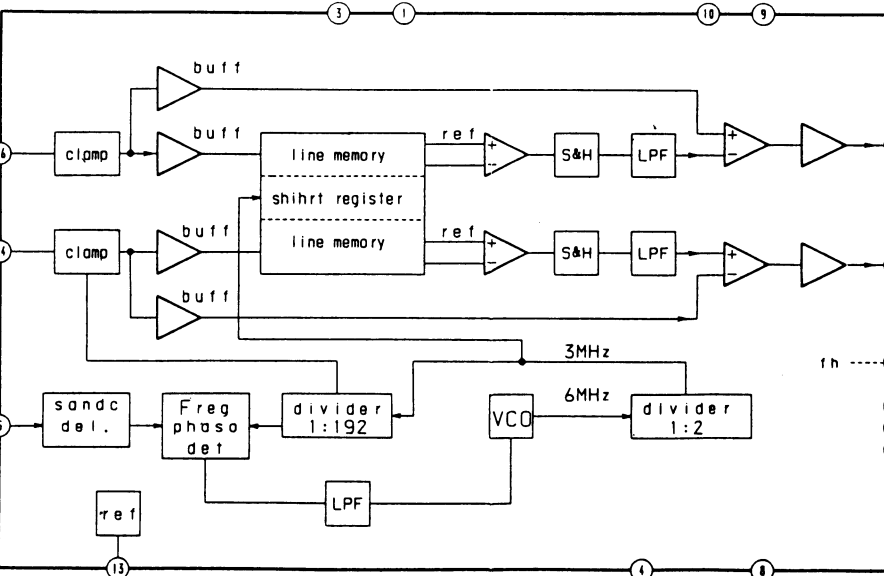




P1 BOARD IC1406 TDA8443B



P1 BOARD IC1402 TDA4661T/V2



# A4

NICAM DECODER  
NICAM DEMODULATOR  
DIGITAL SOUND PROCESSOR

D2

[V-PIN]

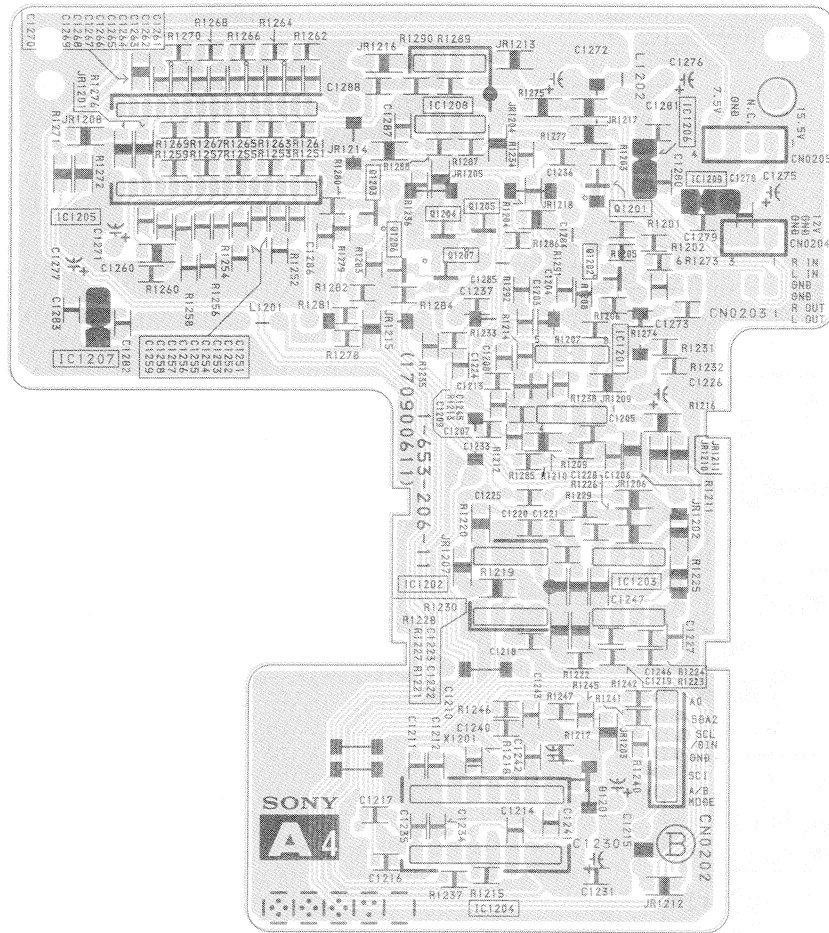
**P1**

[PICTURE IN PICTURE]

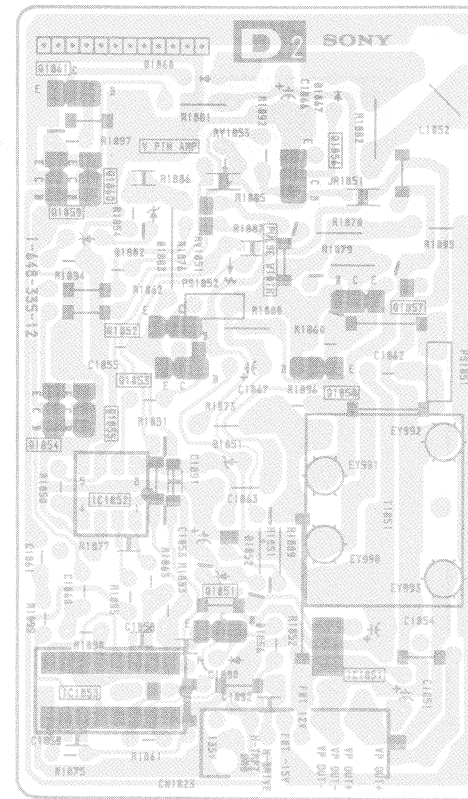
# B

[DIGITAL - COMB  
FILTER]

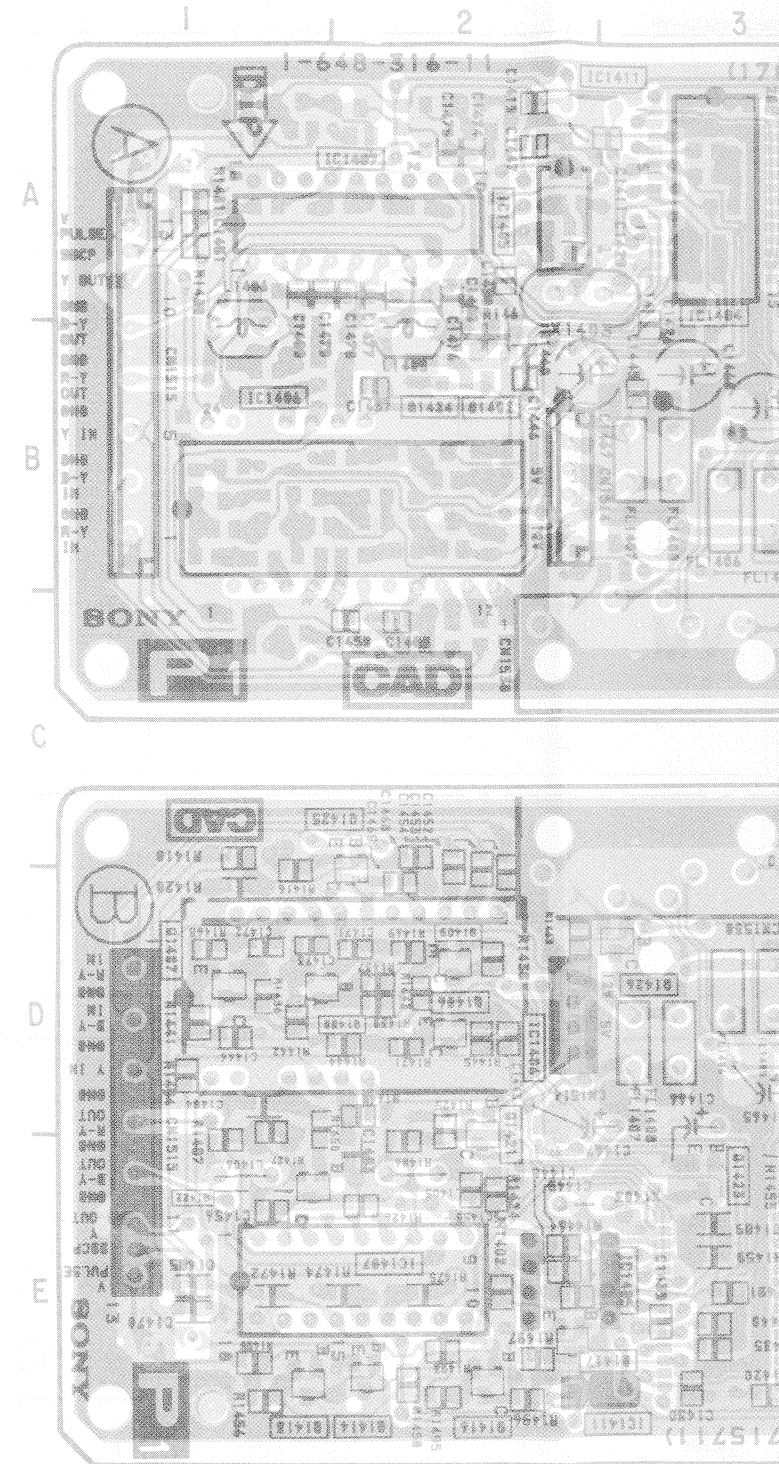
– A4 BOARD –



— D2 BOARD —

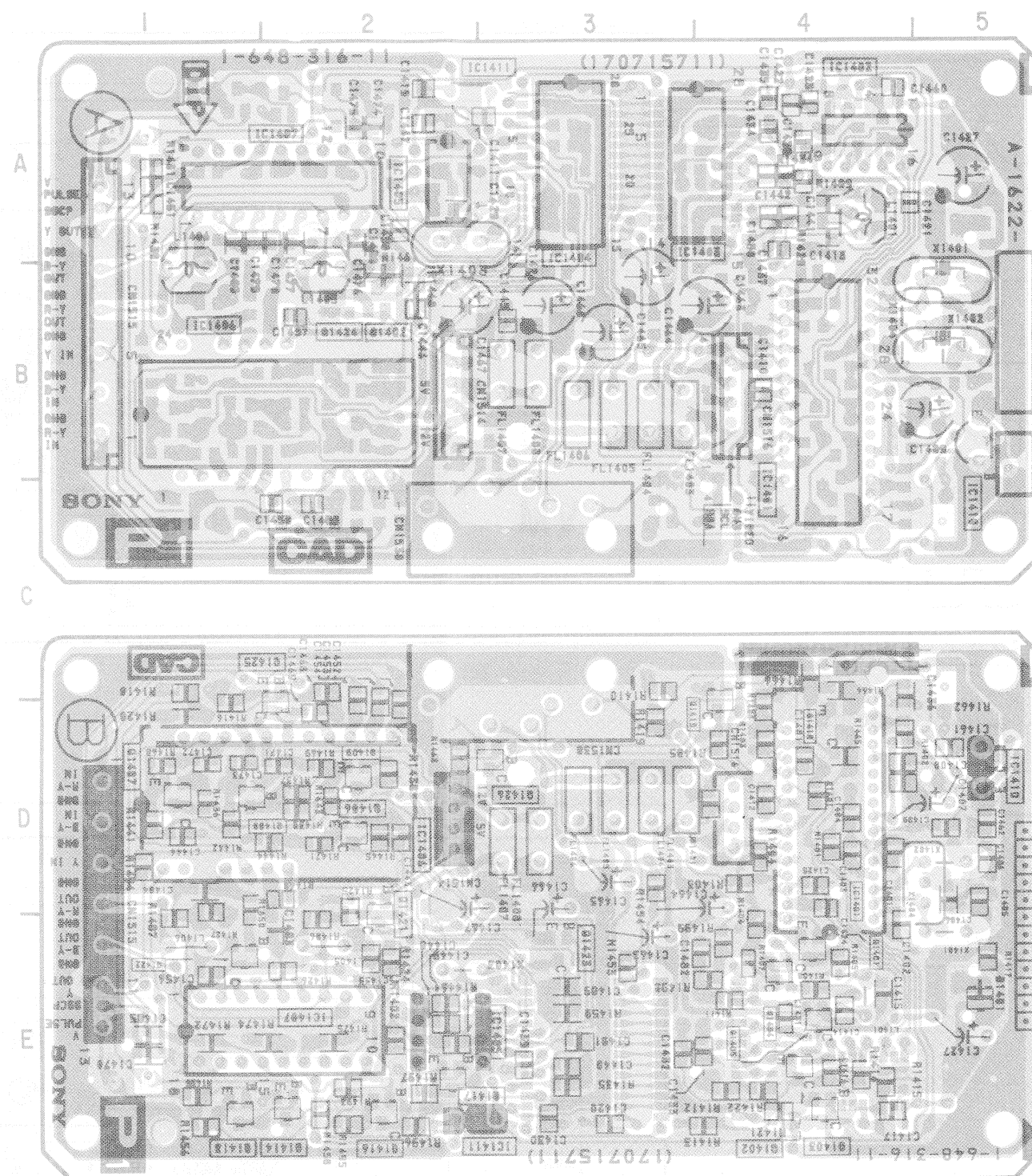
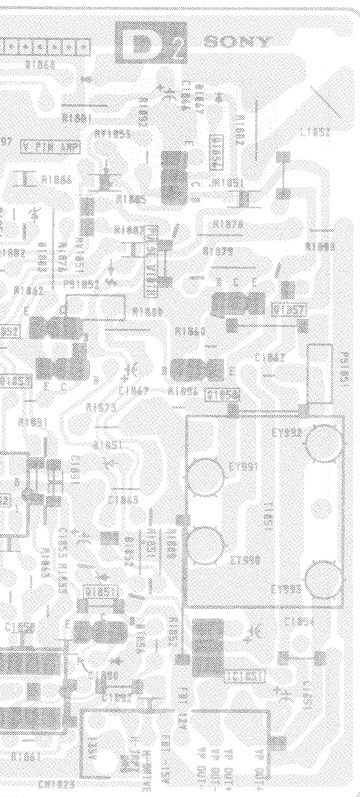


— P1 BOARD —





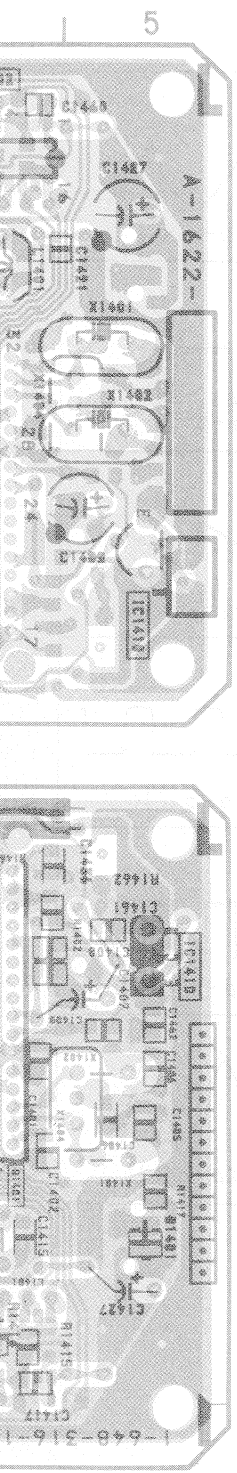
## BOARD —



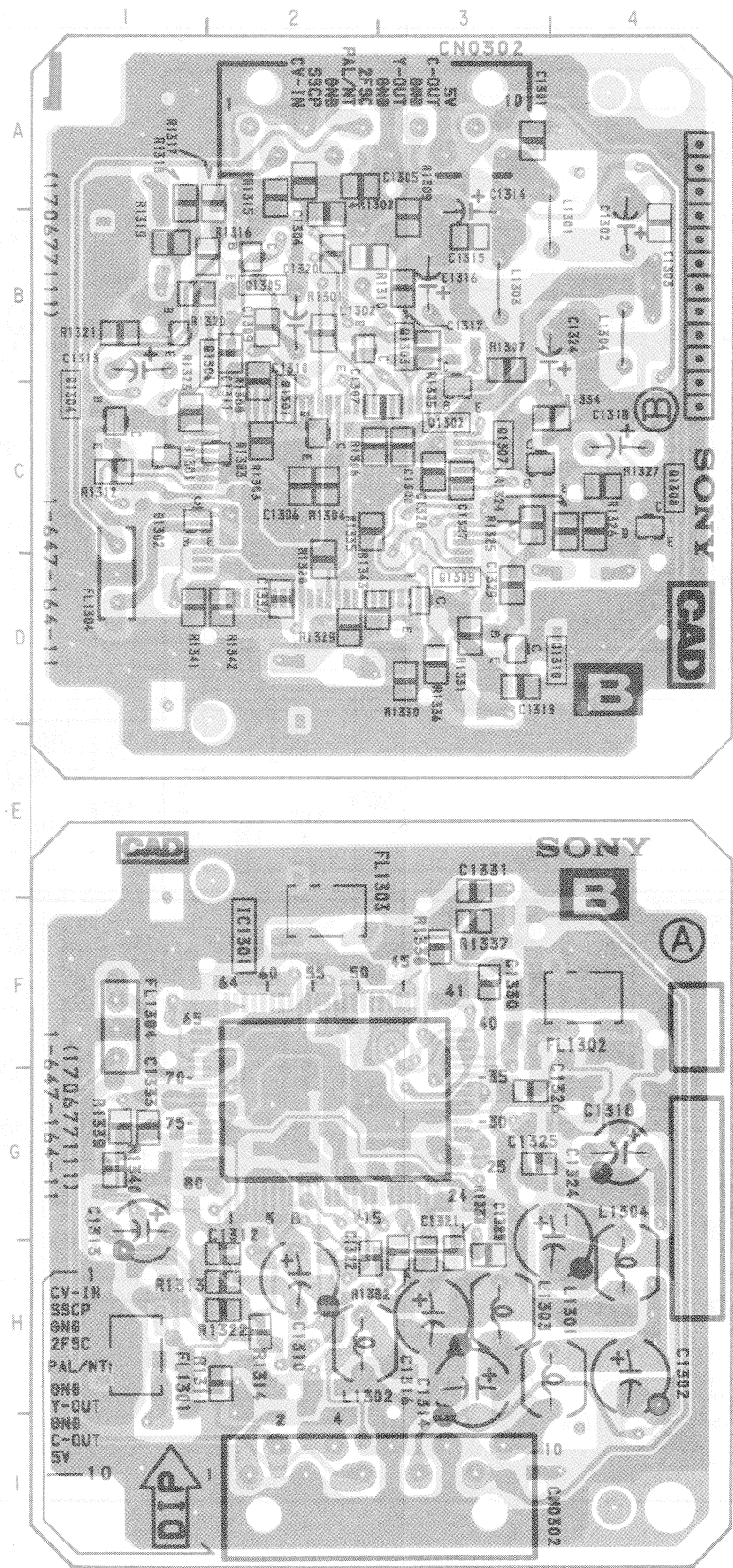
-  : Pattern from the side which enables seeing.
-  : Pattern of the rear side.

IC	
IC1401	B - 4, D - 4
IC1402	A - 4
IC1403	A - 3
IC1404	A - 3
IC1405	A - 2, E - 2
IC1406	B - 1, D - 2
IC1410	B - 5, D - 5
IC1411	A - 2, E - 2
TRANSISTOR	
Q1401	E - 4
Q1402	E - 4
Q1403	E - 4
Q1404	E - 4
Q1405	E - 4
Q1406	D - 2
Q1407	D - 1
Q1408	D - 1
Q1409	D - 2
Q1413	E - 1
Q1414	E - 2
Q1416	E - 2
Q1417	E - 2
Q1419	D - 4
Q1421	E - 2
Q1422	E - 1
Q1425	D - 2
Q1426	D - 3
DIODE	
D1401	E - 5

- B BOARD -



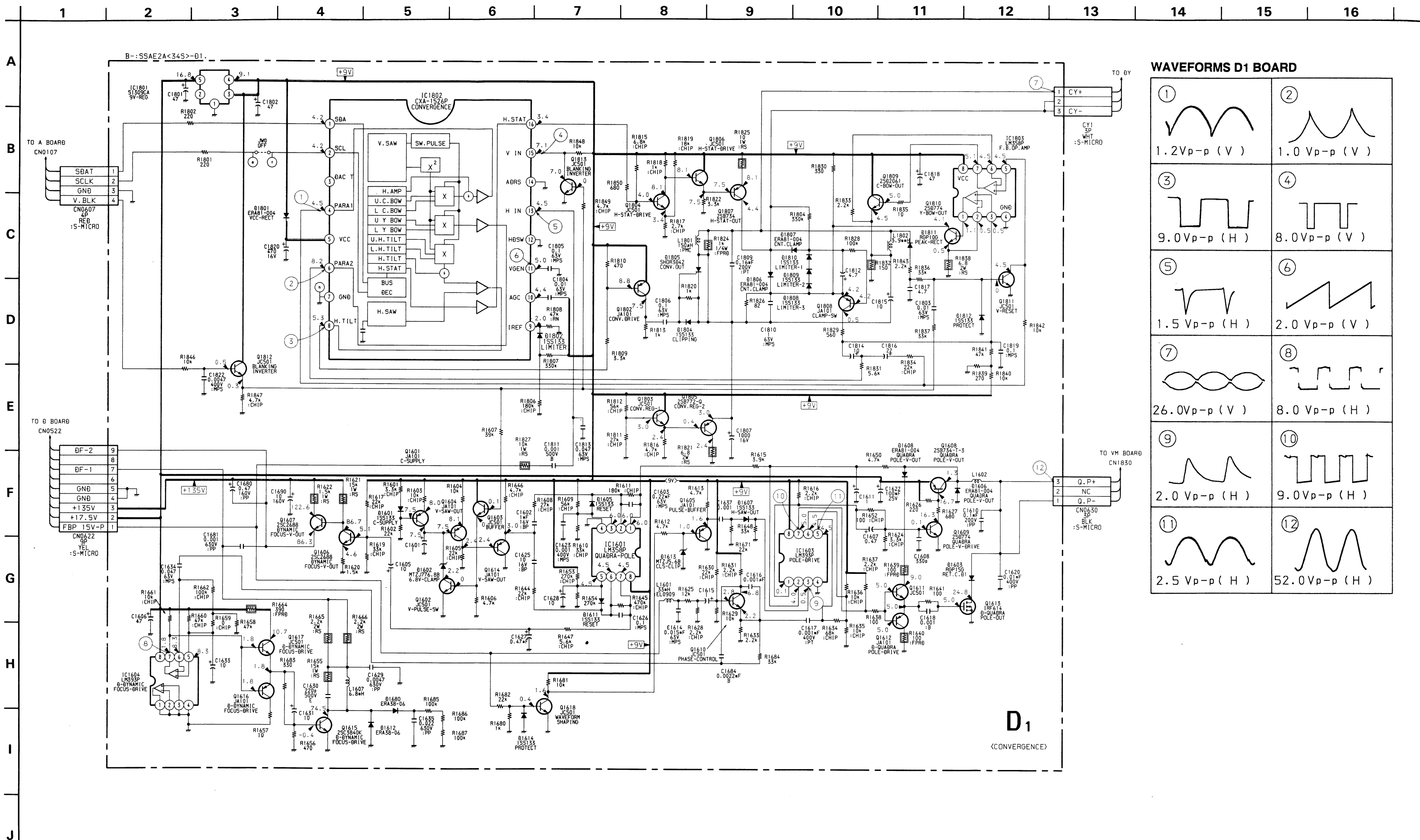
IC	
IC1401	B - 4, D - 4
IC1402	A - 4
IC1403	A - 3
IC1404	A - 3
IC1405	A - 2, E - 2
IC1406	B - 1, D - 2
IC1410	B - 5, D - 5
IC1411	A - 2, E - 2
TRANSISTOR	
Q1401	E - 4
Q1402	E - 4
Q1403	E - 4
Q1404	E - 4
Q1405	E - 4
Q1406	D - 2
Q1407	D - 1
Q1408	D - 1
Q1409	D - 2
Q1413	E - 1
Q1414	E - 2
Q1416	E - 2
Q1417	E - 2
Q1419	D - 4
Q1421	E - 2
Q1422	E - 1
Q1425	D - 2
Q1426	D - 3
DIODE	
D1401	E - 5



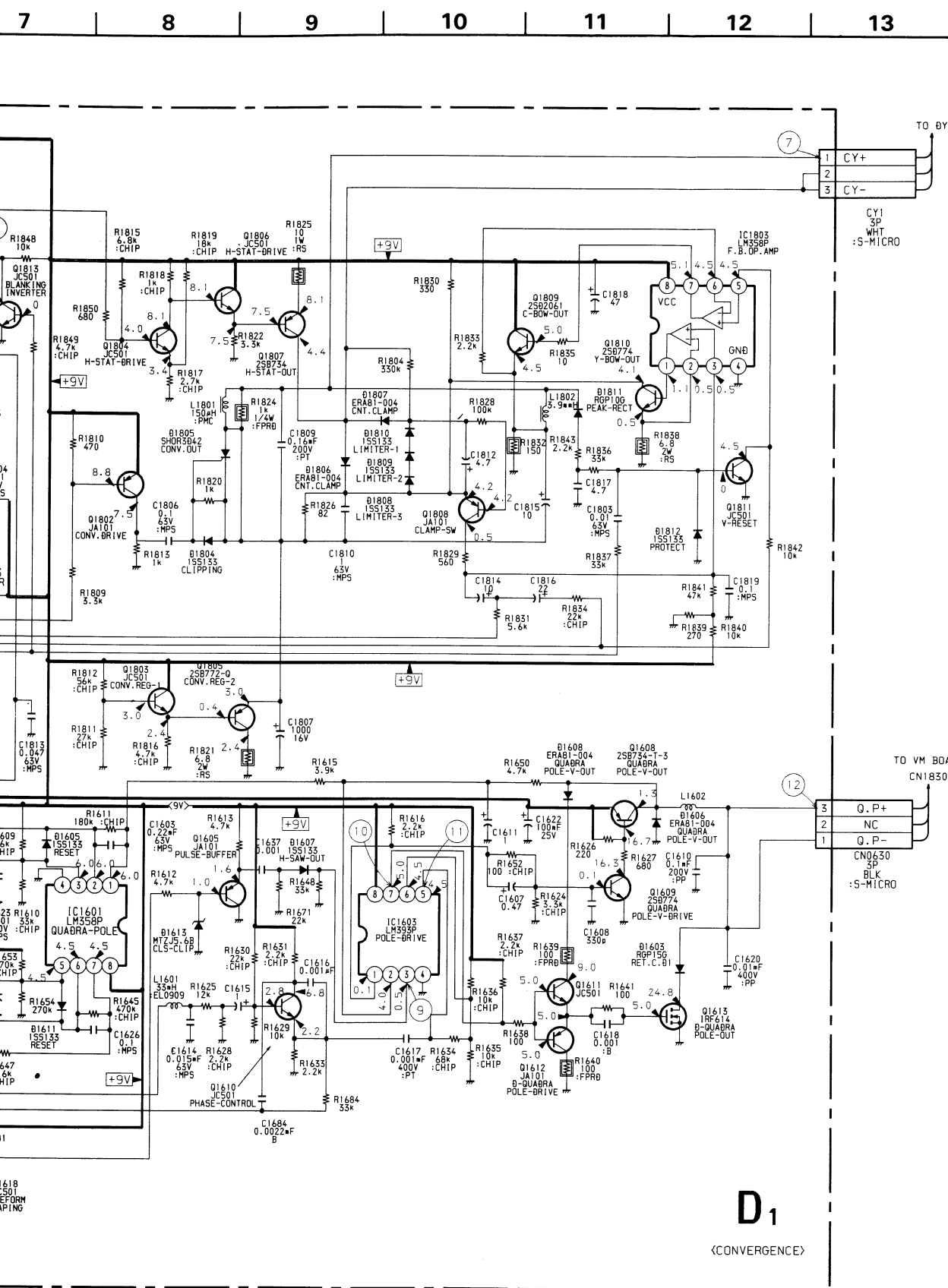
IC	
IC1301	G - 2
TRANSISTOR	
Q1301	C - 2
Q1302	B - 3
Q1303	B - 2
Q1304	C - 1
Q1305	B - 2
Q1306	B - 1
Q1307	C - 3
Q1308	C - 4
Q1310	D - 3
DIODE	
D1301	C - 1

Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.



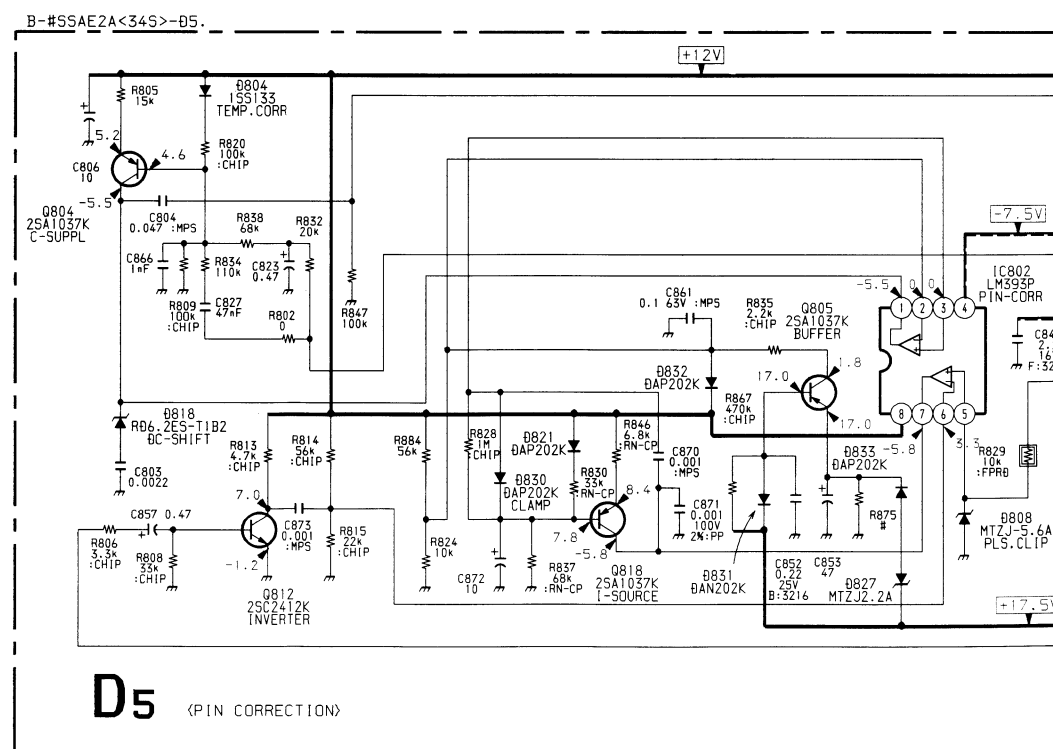
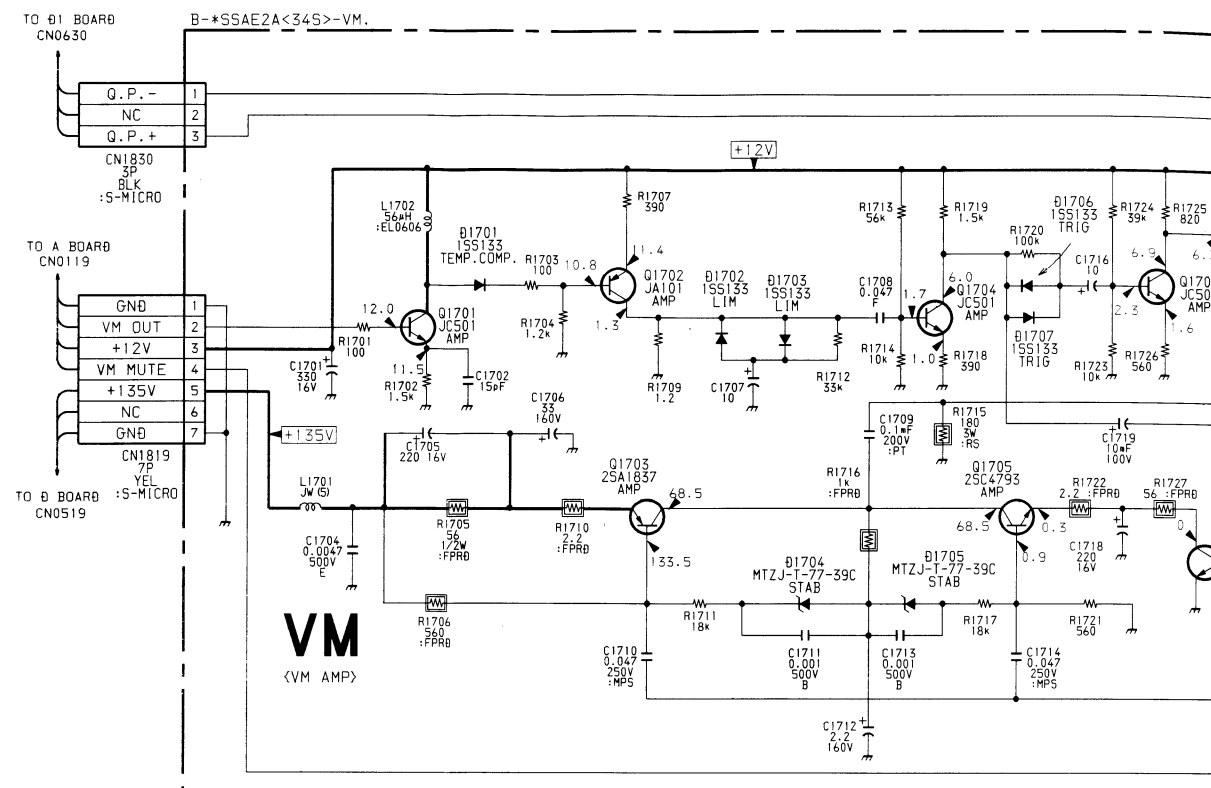
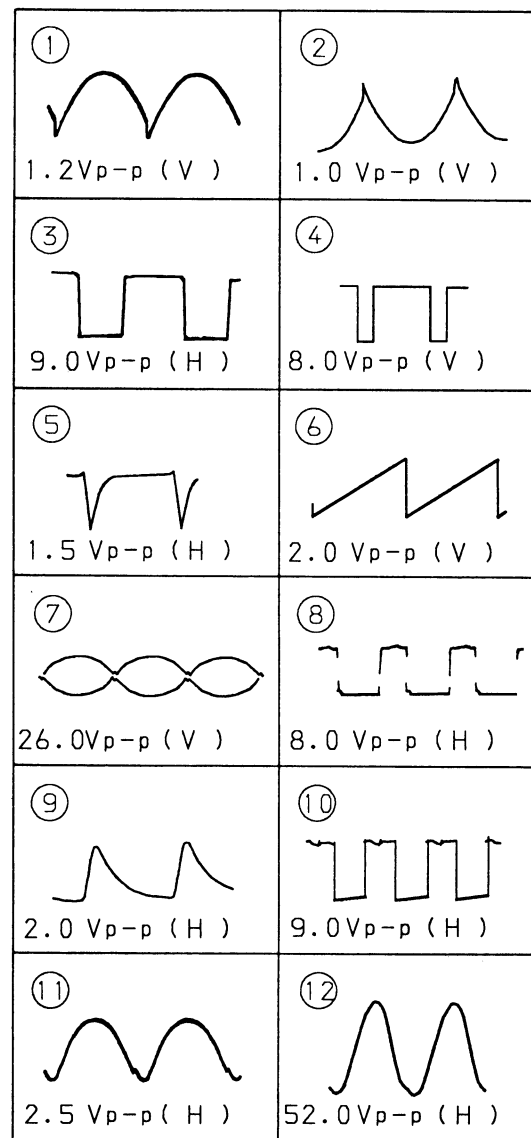




## D<sub>1</sub>

⟨CONVERGENCE⟩

## WAVEFORMS D1 BOARD



**D5**    〈PIN CORRECTION〉

19

20

21

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31

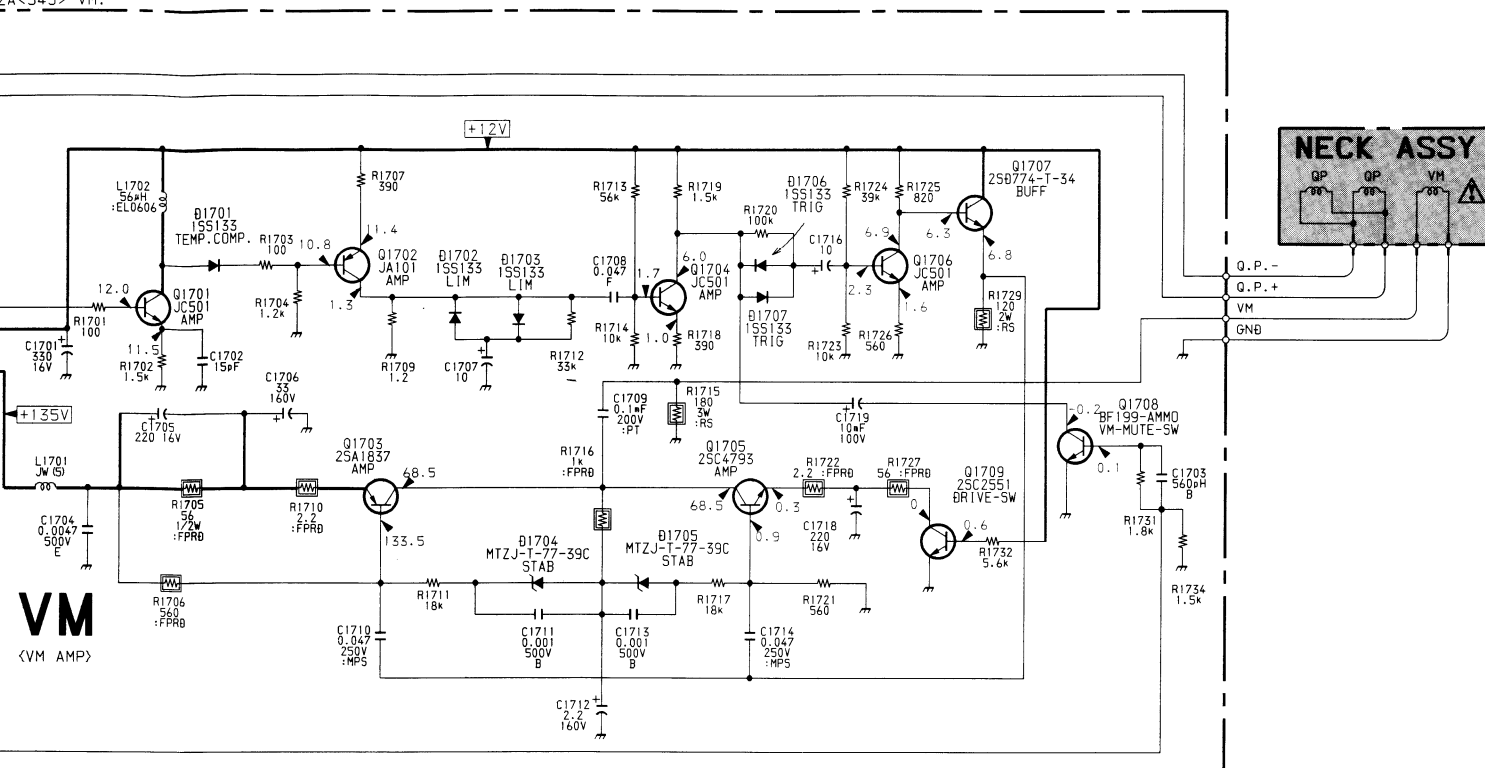
32

33

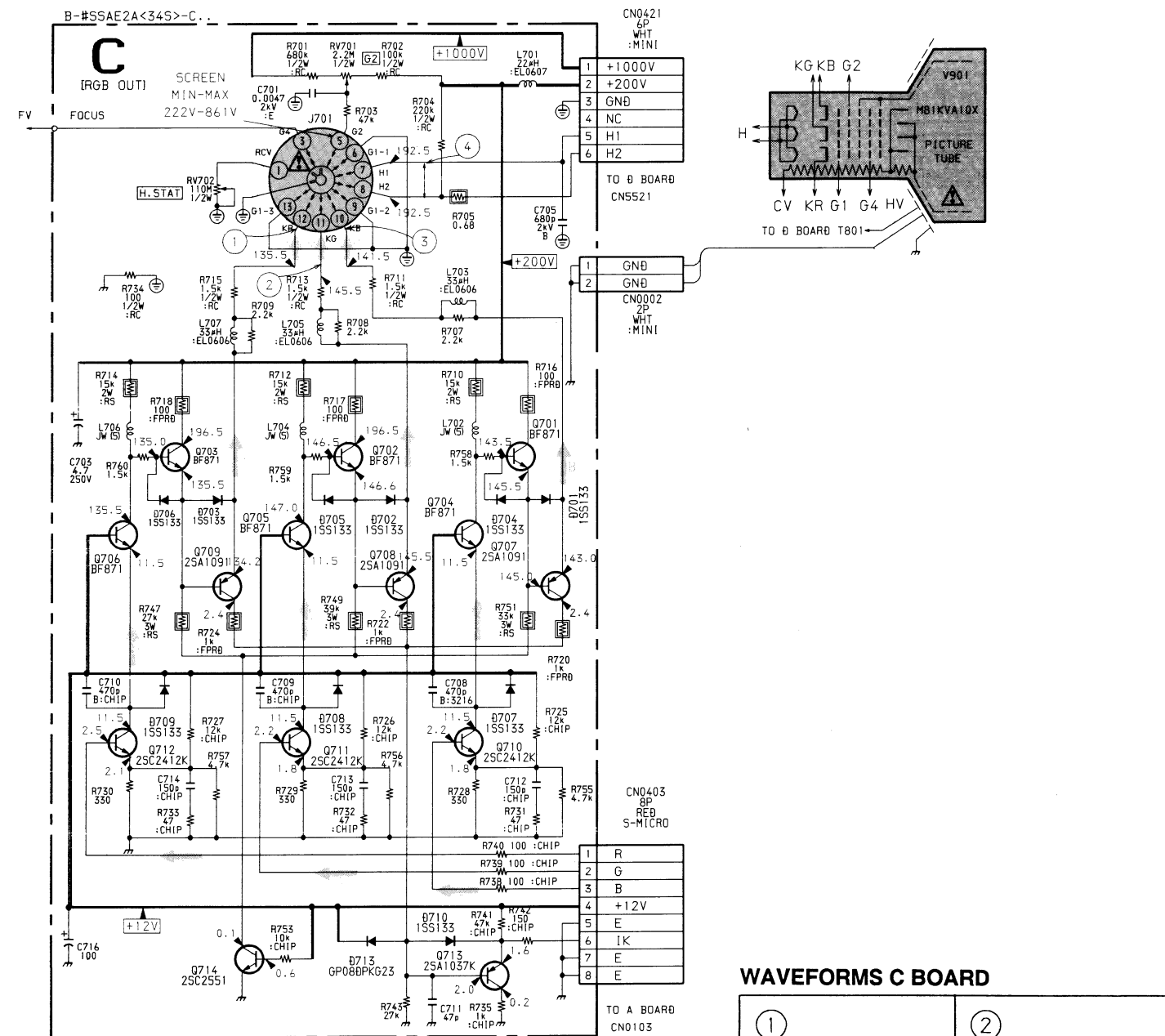
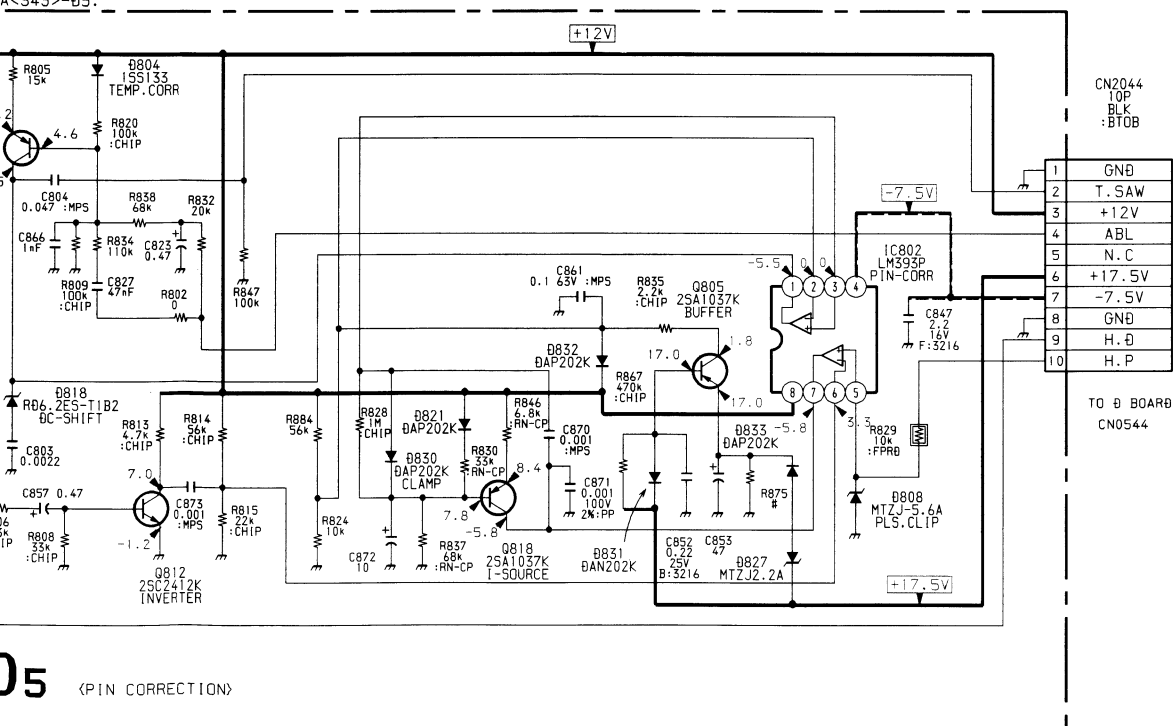
34

35

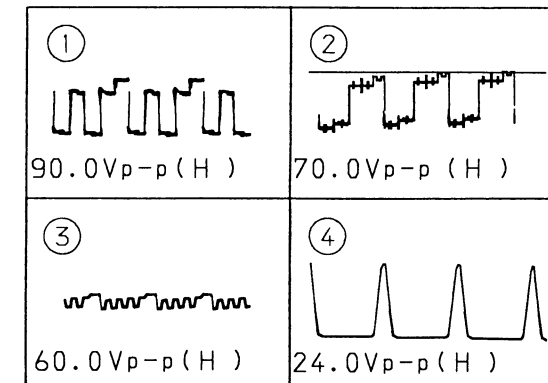
2A&lt;34S&gt;-VM.



A&lt;34S&gt;-DS.

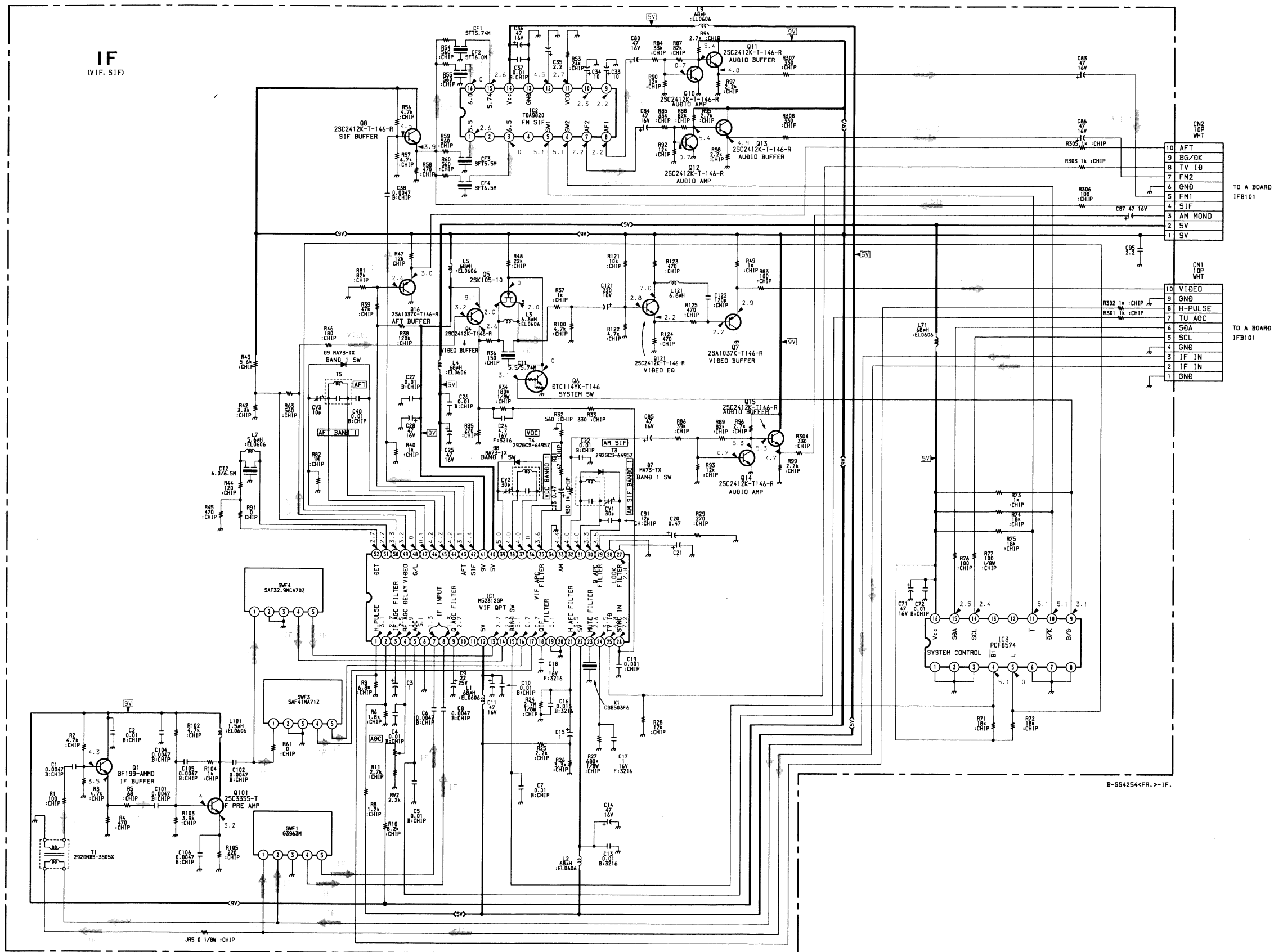


## WAVEFORMS C BOARD





### IFH389F (French Model)



**D1**

[ CONVERGENCE ]

**VM**

[ VM AMP ]

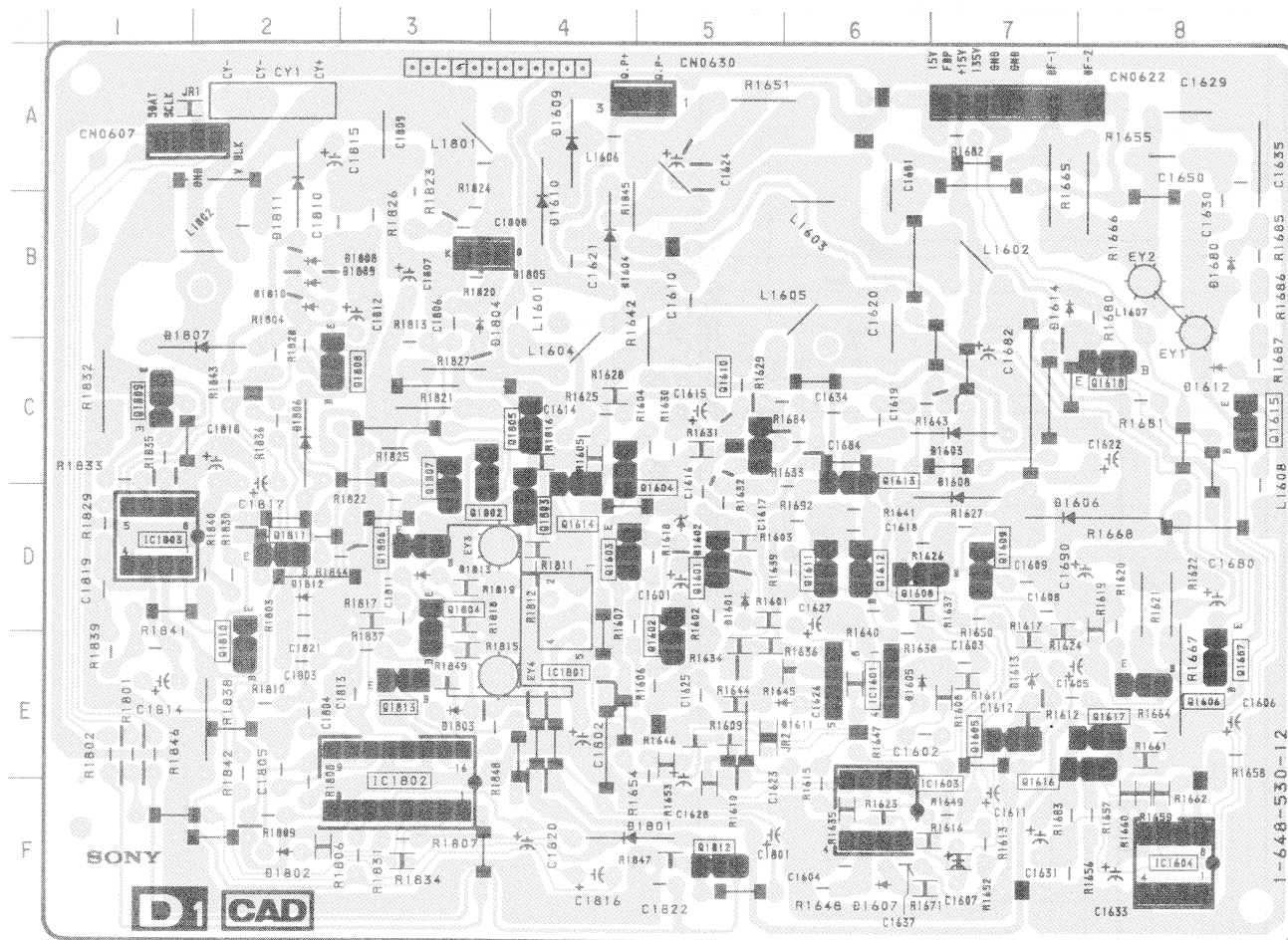
**C**

[ RGB OUT ]

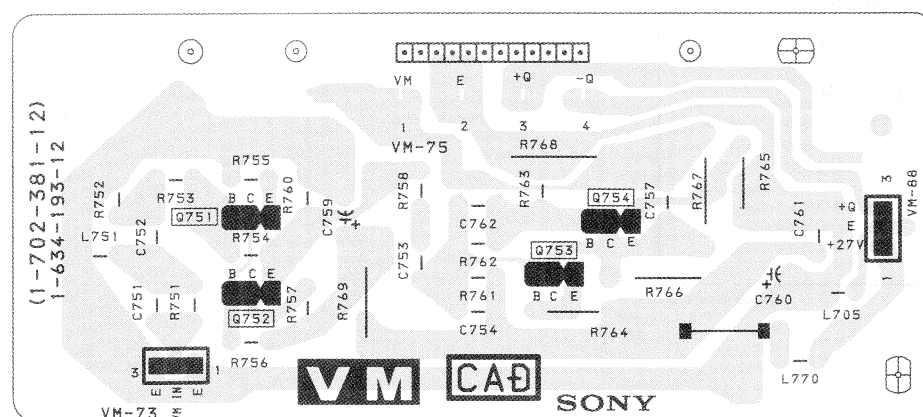
**D5**

[ PIN CORRECTION ]

## - D1 BOARD -

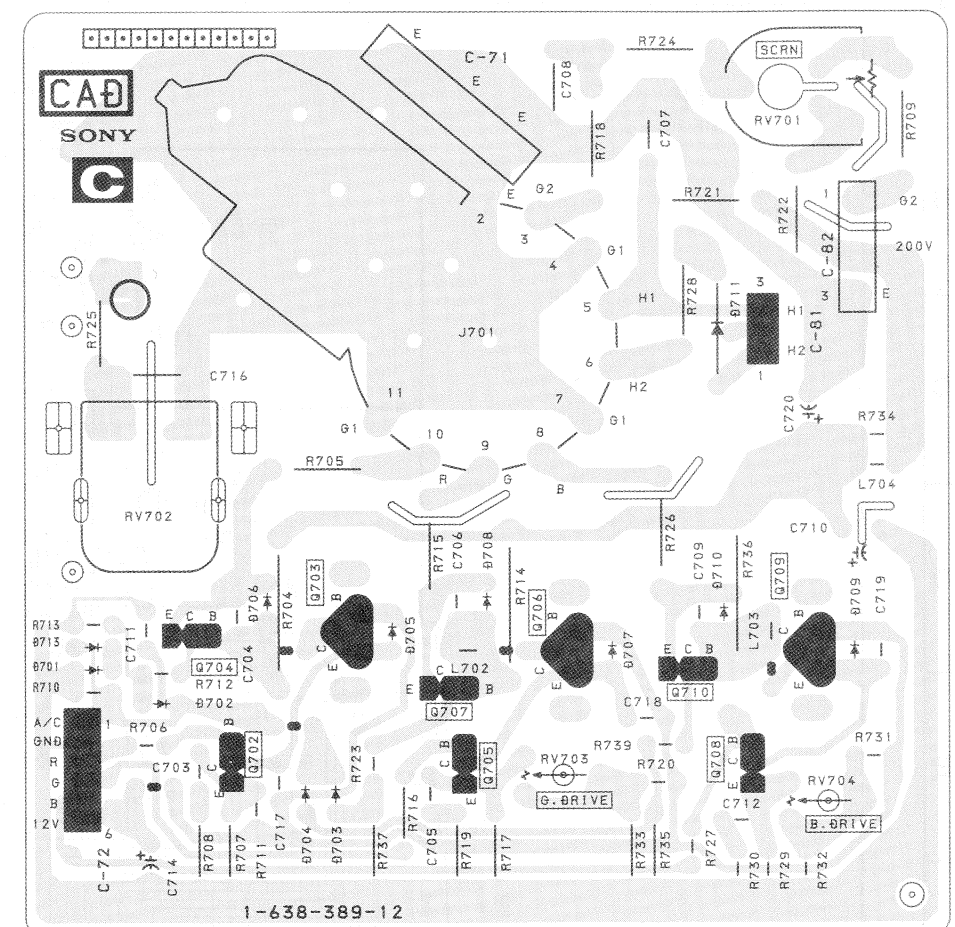


## - VM BOARD -

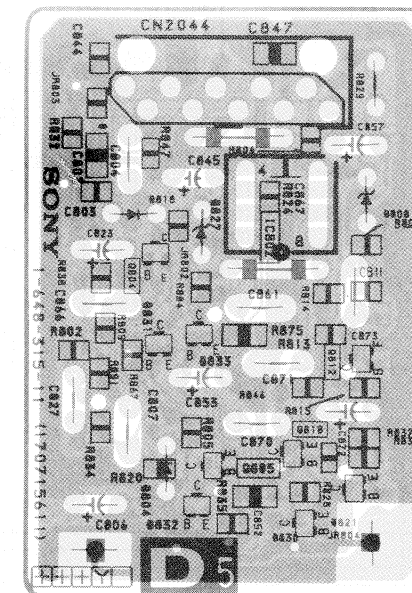


IC			
IC1601	E-6	Q1807	C-3
IC1603	F-6	Q1808	C-2
IC1604	F-8	Q1809	C-1
IC1801	D-4	Q1810	E-1
IC1802	E-3	Q1811	D-2
IC1803	D-1	Q1812	F-5
		Q1813	E-3
TRANSISTOR		DIODE	
Q1601	D-5	D1601	D-5
Q1602	D-5	D1602	D-5
Q1603	D-4	D1603	C-7
Q1604	C-4	D1605	E-6
Q1605	F-7	D1606	D-7
Q1606	F-8	D1607	F-6
Q1607	F-8	D1608	D-7
Q1608	D-6	D1611	E-6
Q1609	D-7	D1612	C-8
Q1610	C-5	D1613	E-7
Q1611	D-6	D1614	B-7
Q1612	D-6	D1680	B-8
Q1613	C-5	D1801	F-5
Q1614	C-4	D1802	F-2
Q1615	C-8	D1804	B-3
Q1616	E-8	D1805	B-4
Q1617	E-8	D1806	C-2
Q1618	C-8	D1807	B-2
Q1802	C-3	D1808	B-2
Q1803	D-4	D1809	B-2
Q1804	D-3	D1810	B-2
Q1805	C-4	D1811	A-2
Q1806	D-3	D1812	D-2

## - C BOARD -



## - D5 BOARD -



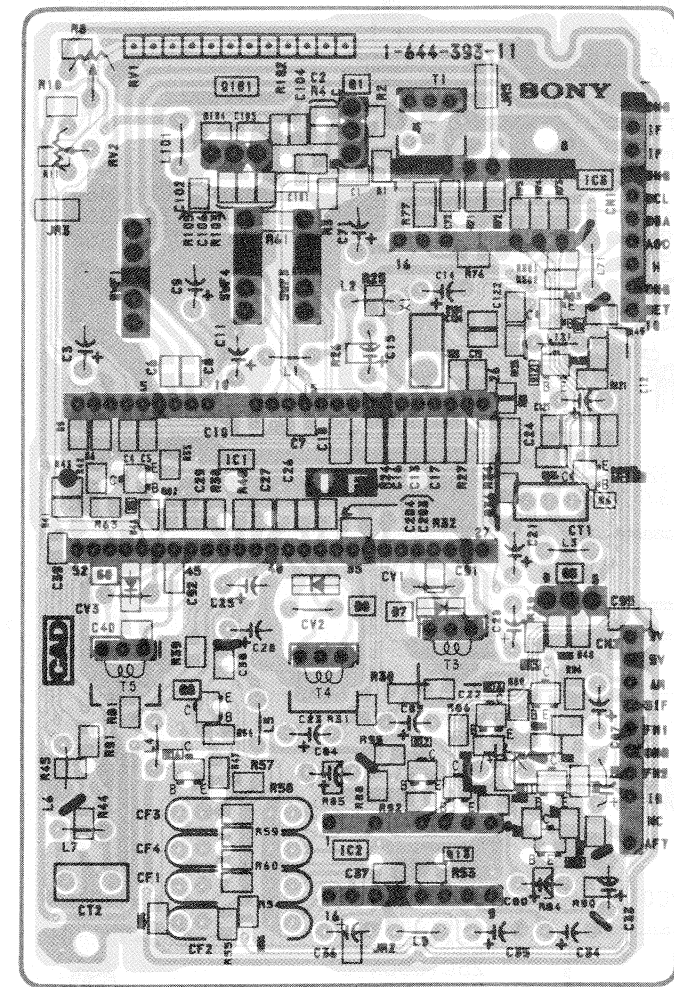
Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

IF

[VIF, SIF]

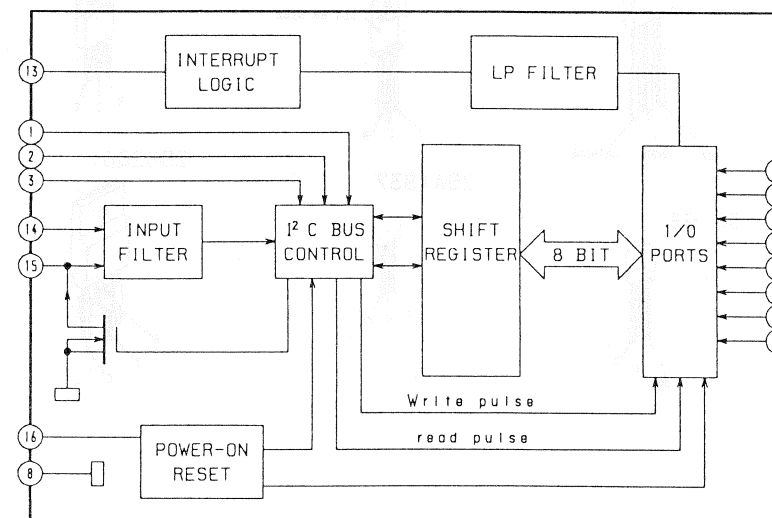
## - IF BOARD - (French Model)



Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

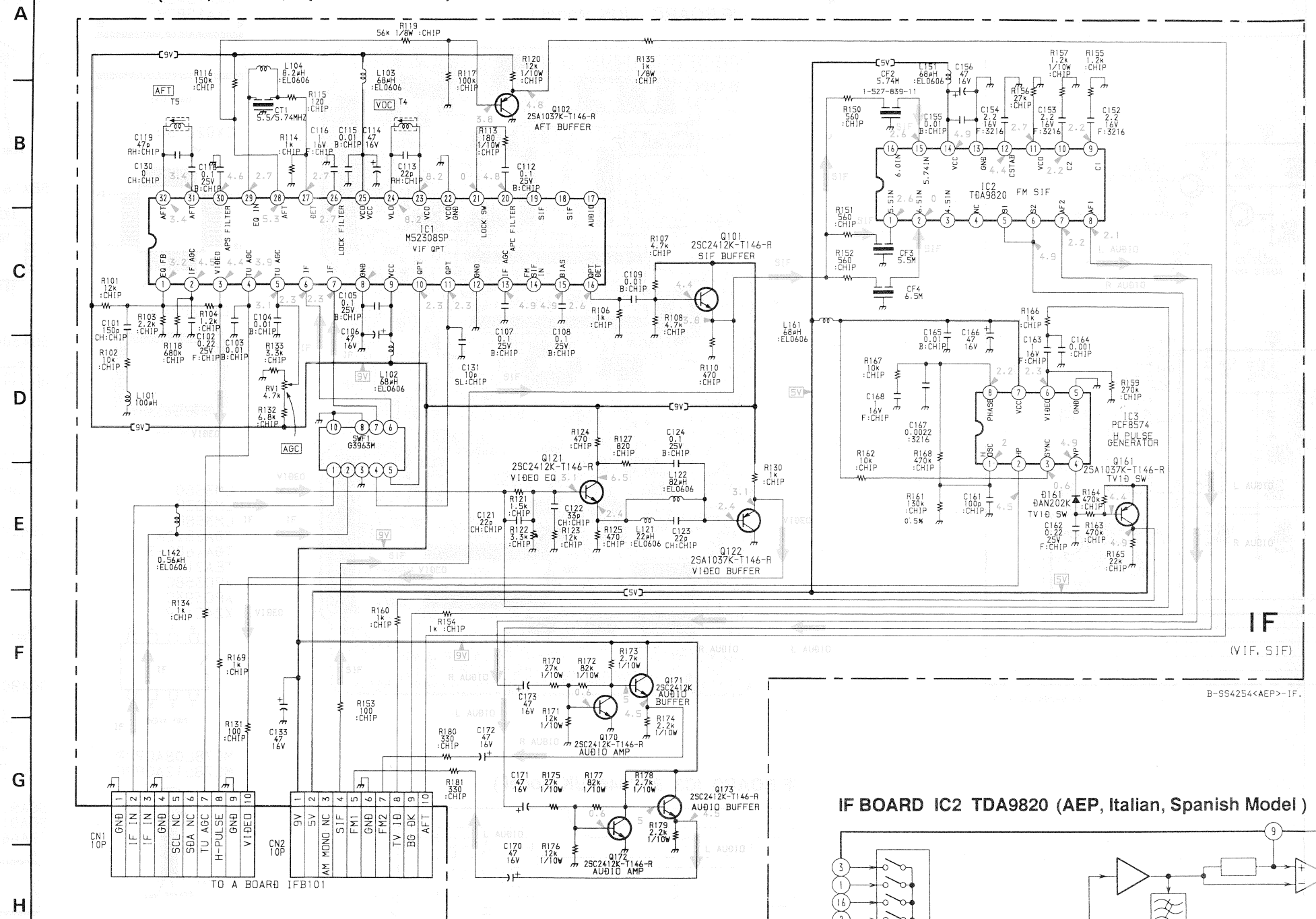
## IF BOARD IC3 PC8574 (French Model)



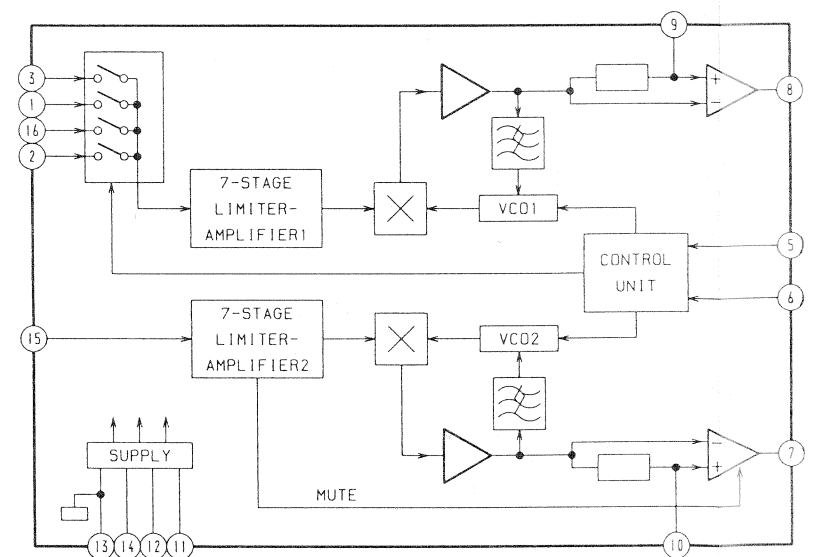
KV-S343

KV-S343

## IFH389 (AEP, Italian, Spanish Model)

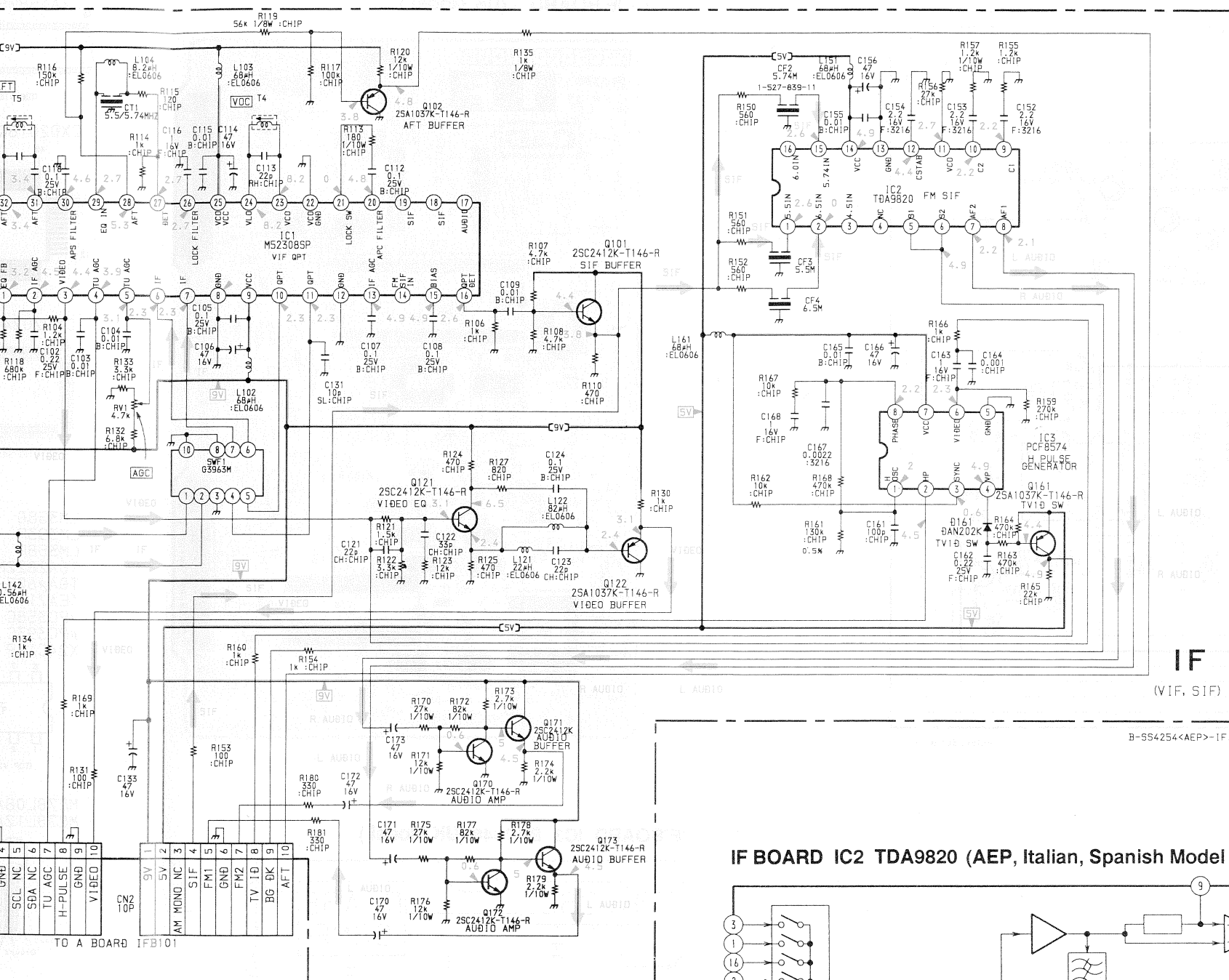


## IF BOARD IC2 TDA9820 (AEP, Italian, Spanish Model)

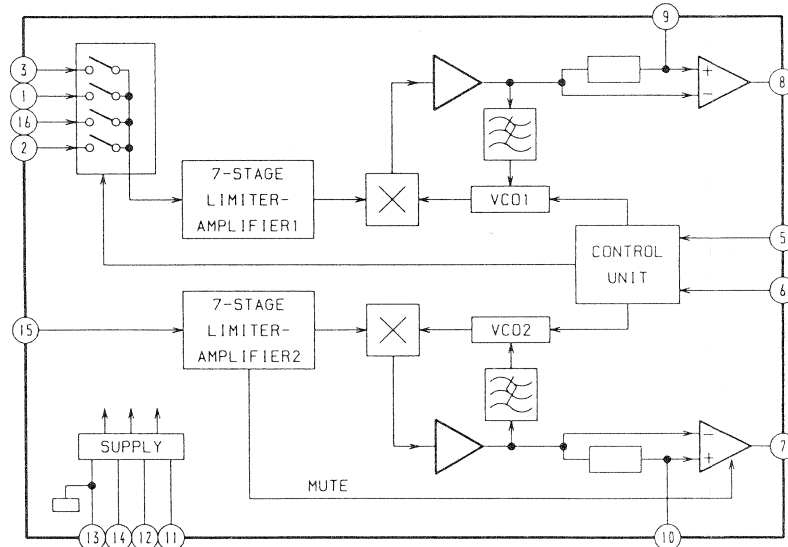




(AEP, Italian, Spanish Model)

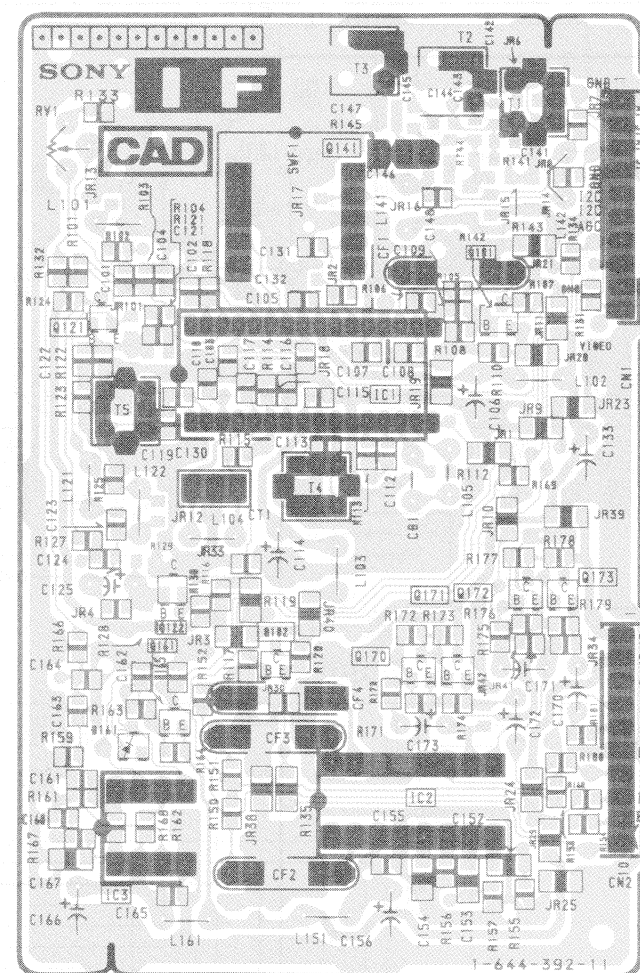


**IF BOARD IC2 TDA9820 (AEP, Italian, Spanish Model )**

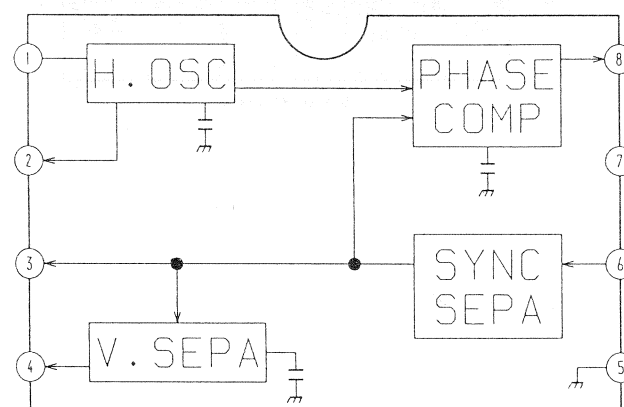


**IF** VIF, SIF

– IF BOARD – (AEP, Italian, Spanish Model )

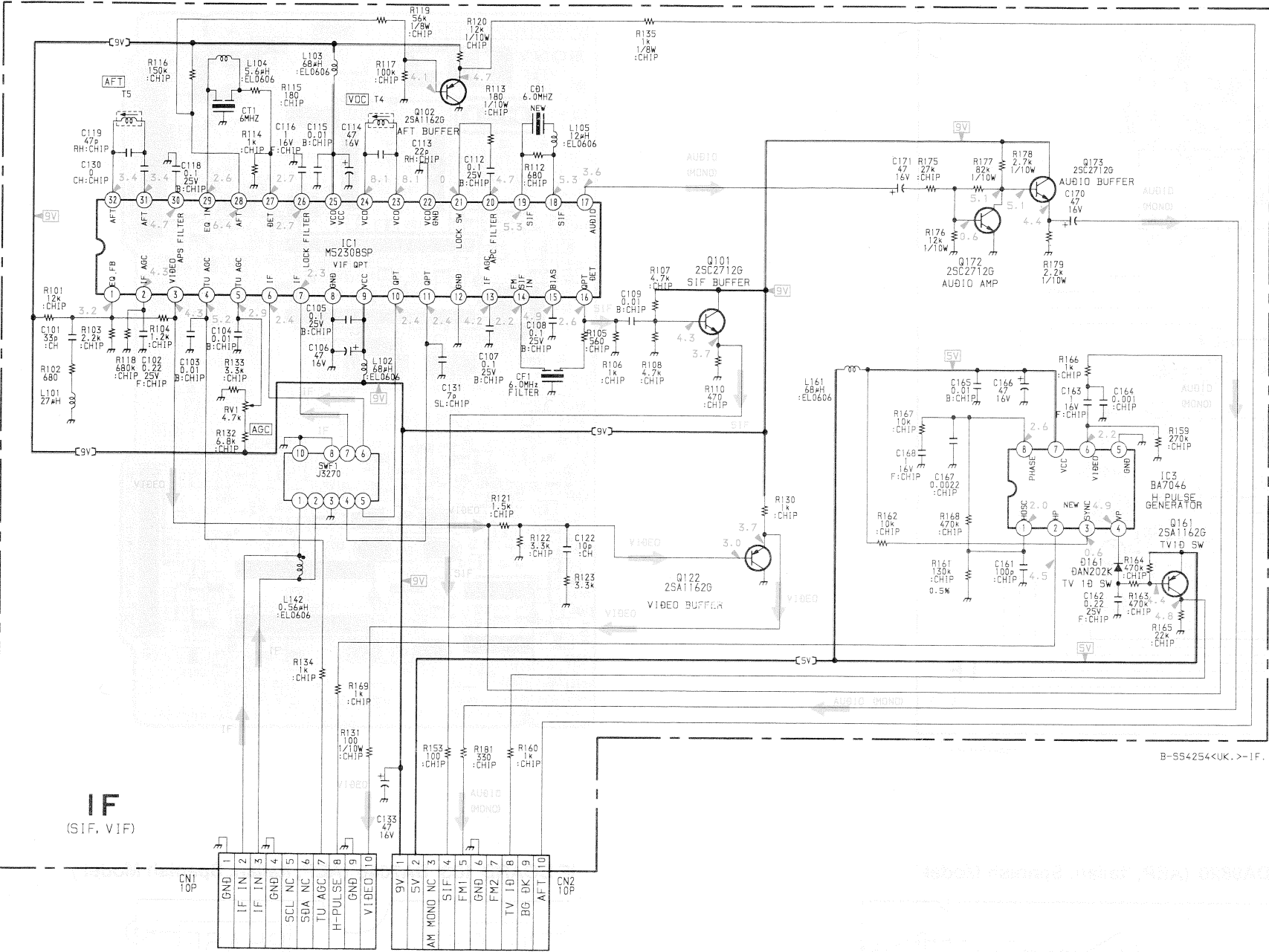


**IF BOARD IC3 BA7046 (AEP, Italian, Spanish Model )**

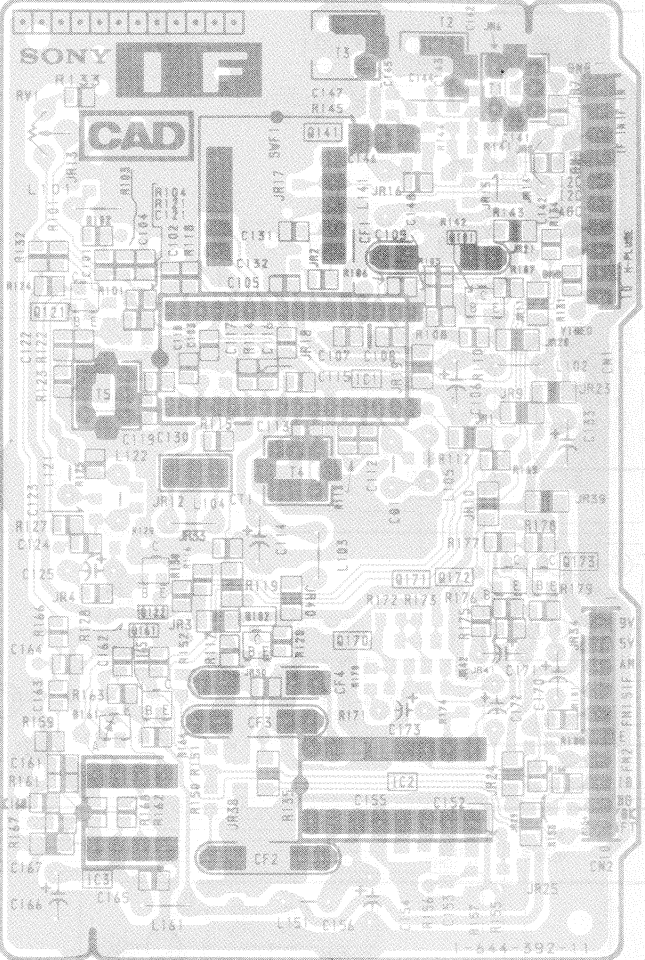


IF [VIF, SIF]

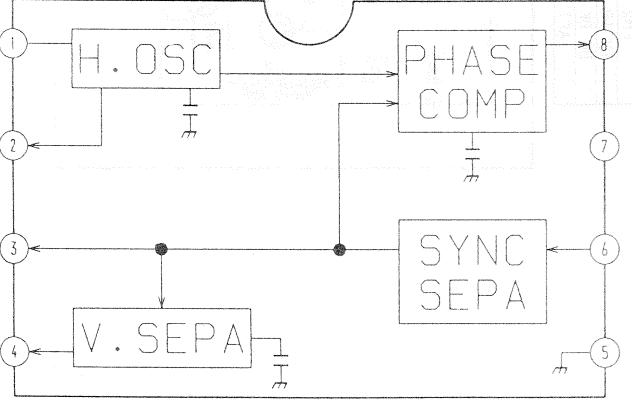
IFH395 (UK Model)



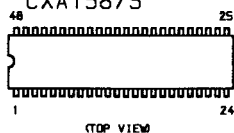
- IF BOARD - (UK Model)



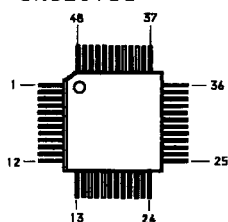
IF BOARD IC3 BA7046 (UK Model)



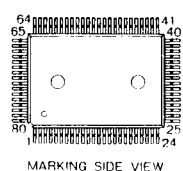
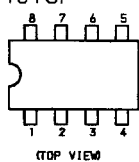
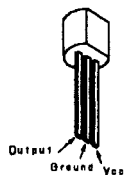
## 5-4. SEMICONDUCTORS

CXA1545AS  
CXA1587S

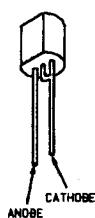
CXØ2018Q



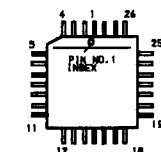
CXØ2024Q

LM358Ø  
LM393P  
LM358P  
TØA2822M  
TØA4605-3  
TEA2114  
µPC358C  
µPC393C  
X24C16PMC78L08ACPRP  
MC78L12ACPRPNJM78L05A  
NJM78L05F  
NJM78M09FA

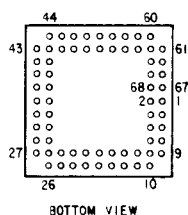
RC7809FA



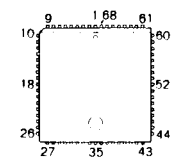
SBX1610-11



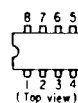
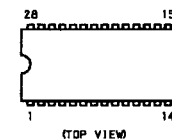
SØA30C162-GEG



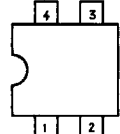
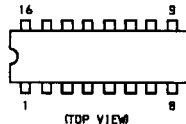
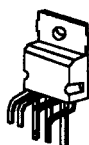
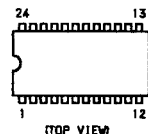
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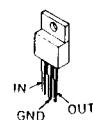
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SØA91883X-GEG  
TØA6612

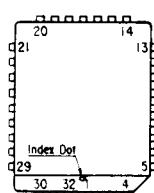
SFH617G-1

1. VCC  
2. NC  
3. Vout  
4. GNDSN74LS221N  
TØA466A/V2  
TØA9160/N2TØA2052  
TØA8138  
TØA8179STØA8443B  
TØA9145/N1

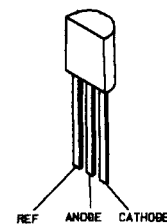
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TMS27PC010A-15FML



TL431CLP



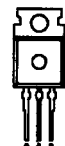
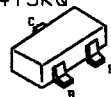
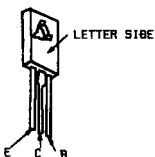
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BF871



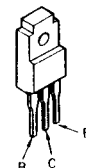
BUZ91A-E3155

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ØTA144EK  
ØTA144TK  
ØTC114EK  
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2SA1162-G  
2SC1623-L5L6  
2SC2412K-T-146-R  
2SC2412K-T-146-QR  
2SC2413KQJA101-Q  
JC501-Q-AMMO  
2SA733-K  
2SA1091-Ø  
2SC1890A-Ø  
2SC2551-Ø2SA1220A-K  
2SB772-Q  
2SC2688-LK

2SA1837

2SB734-34  
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2SB774-342SB1186A  
2SC3298B-Y  
2SB1763A

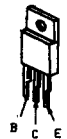
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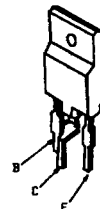
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2SC4927-Ø1

2SB798A-P  
2SB2012

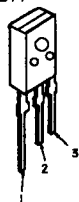
2SB2061



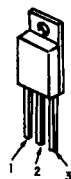
2S02096-EF



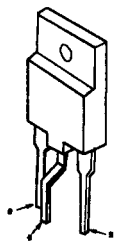
0105C6M



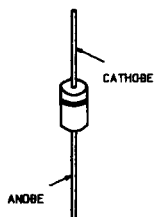
ESAB92-02



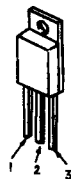
2SK1916-53-F50



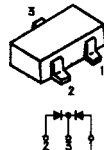
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ERC25-065  
RGP02-20EL-6394  
RU30ALFS1  
RU3AM



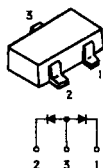
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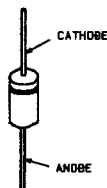
MA152WK



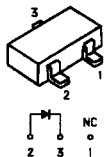
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1S2836



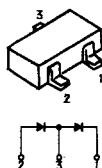
EL1Z  
ERB44-06  
GP080  
RGP10GPKG23  
RGP15GPKG23  
R2K-V1  
1N4148A-T265



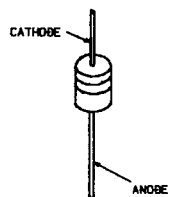
MA3030-H (TK)  
MA3039H-TX  
MA3047L-TX



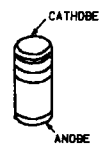
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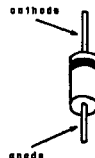
ERA85-009  
MTZJ-T-77-12B  
MTZJ-T-77-13C  
MTZJ-T-77-15A  
MTZJ-T-77-2.2A  
MTZJ-T-77-3.6A  
MTZJ-T-77-30B  
MTZJ-T-77-33C  
MTZJ-T-77-39C  
MTZJ-T-77-5.6A  
MTZJ-T-77-5.6B  
MTZJ-T-77-7.5A  
MTZJ-T-77-9.1  
MTZN-1013  
R012ES-B2  
R05.6ES-B1  
R05.6ES-B2  
R06.2ES-B2  
R07.5ES-B2



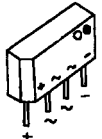
MA3051L-TX



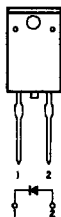
RGP02-17EL-6433



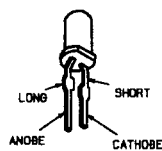
1SS226



0SL60



L0201VR



## SECTION 6

## EXPLODED VIEWS

## NOTE :

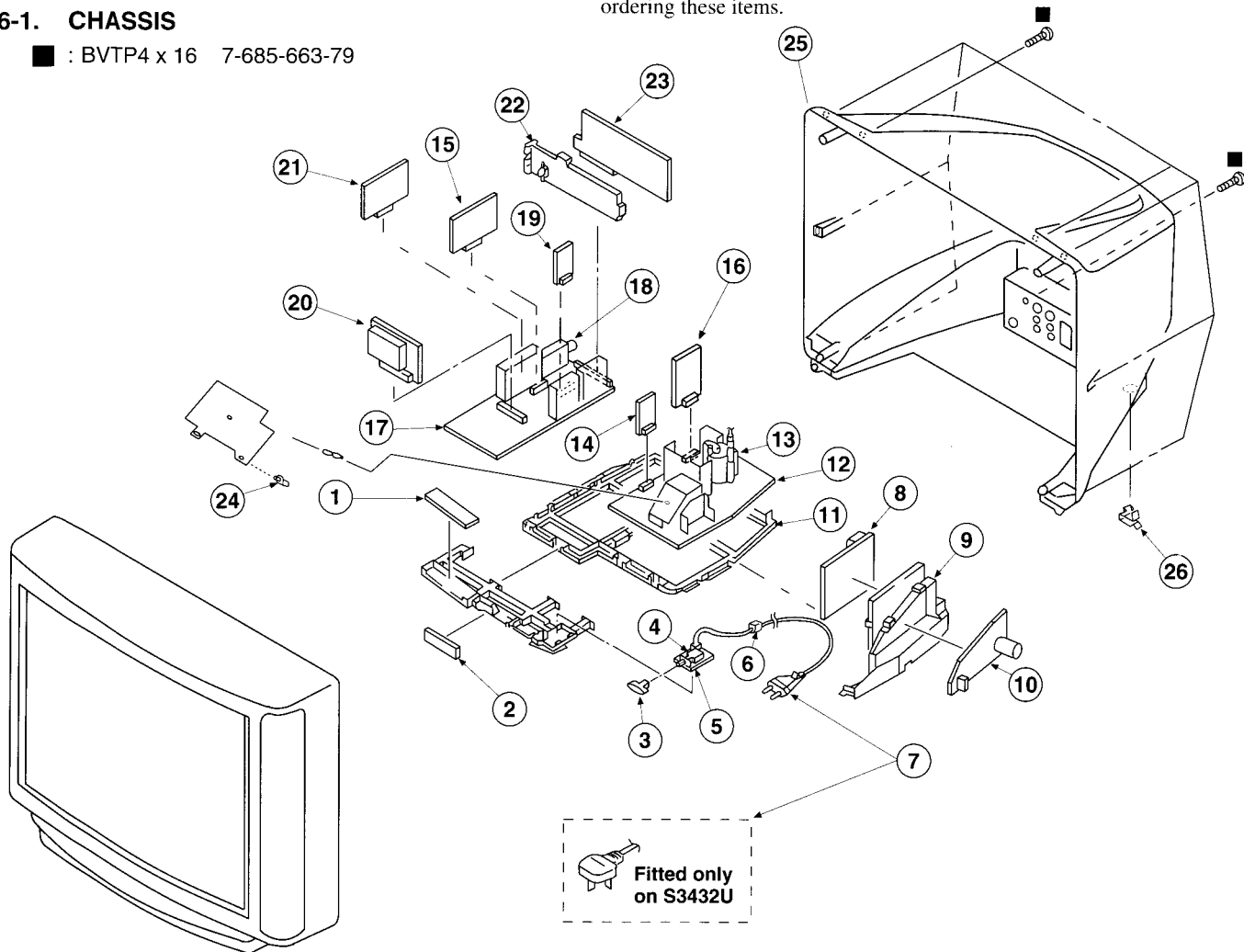
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked  $\Delta$  are critical for safety.  
Replace only with the part number specified.

## 6-1. CHASSIS

■ : BVTP4 x 16 7-685-663-79



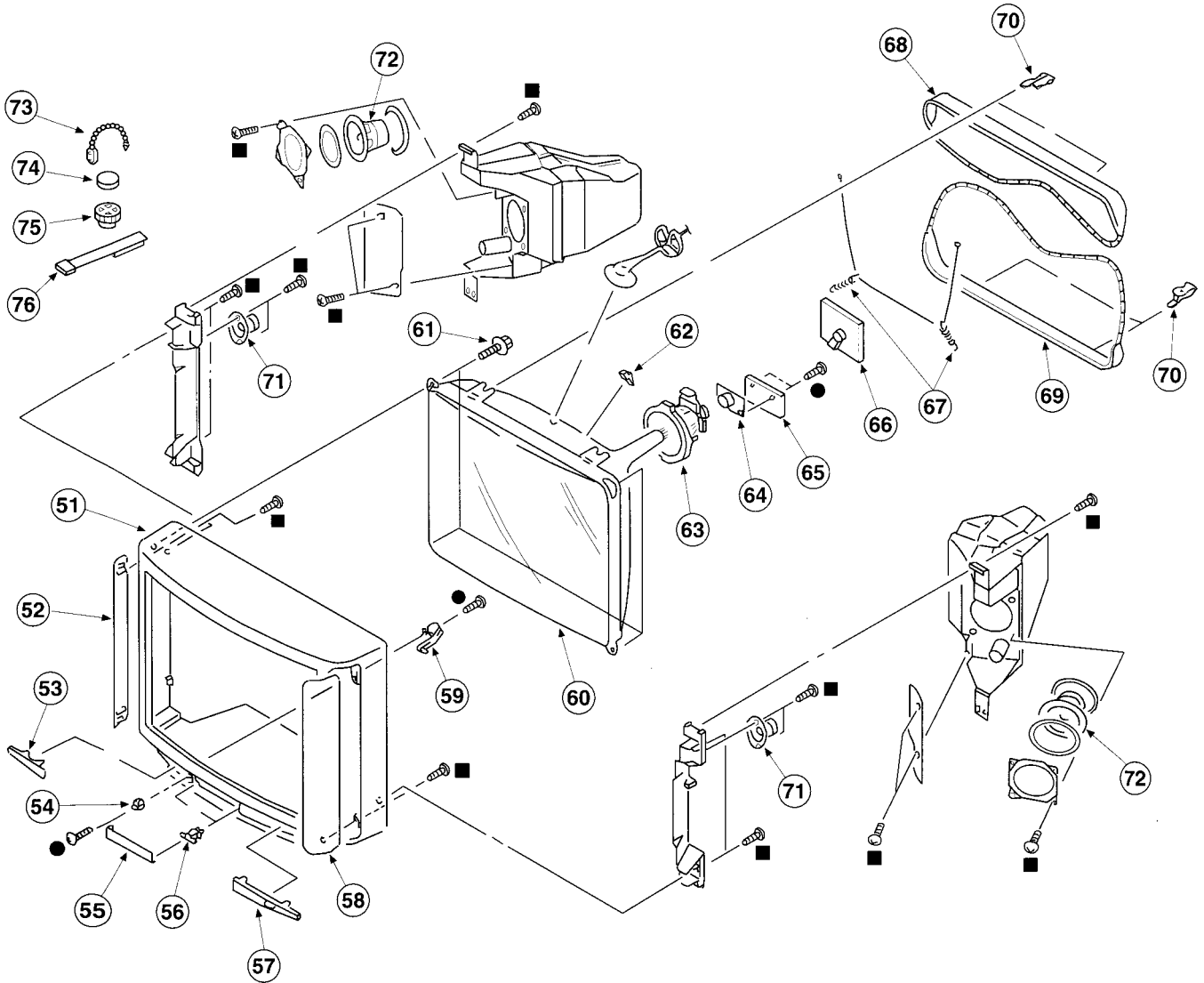
REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
1	*1-648-314-11	H1 BOARD		15	*A-1630-233-A	A4 BOARD, COMPLETE	
2	*1-648-475-11	H2 BOARD				(KV-S3431A, S3431B, S3431D, S3431E)	
3	4-202-124-01	BUTTON, POWER			*A-1630-236-A	A4 BOARD, COMPLETE (KV-S3433E)	
4	$\Delta$ 1-571-433-11	SWITCH, PUSH (AC POWER)			*A-1630-239-A	A4 BOARD, COMPLETE (KV-S3432U)	
5	*1-648-312-12	F1 BOARD		16	*A-1640-114-A	D2 BOARD, COMPLETE	
6	$\Delta$ 4-389-201-01	HOLDER, AC CORD		17	*A-1632-205-A	A BOARD, COMPLETE (KV-S3431A/S3431B/S3431C/S3431D/S3431E/S3431K)	
7	$\Delta$ 1-751-680-11	CORD, POWER (WITH NOISE FILTER)			*A-1632-206-A	A BOARD, COMPLETE (KV-S3431B)	
	$\Delta$ 1-590-460-11	CORD, POWER (WITH CONNECTOR)			*A-1632-208-A	A BOARD, COMPLETE (KV-S3433E)	
	$\Delta$ 1-590-762-11	CORD, POWER (WITH PLUG)			*A-1632-210-A	A BOARD, COMPLETE (KV-S3432U)	
			(KV-S3432U)	18	1-693-185-11	TUNER, (UV916H) (KV-S3431A/S3431B/S3431D/S3433E/S3431K)	
8	*A-1640-098-A	D1 BOARD, COMPLETE			1-693-184-11	TUNER, (U944C) (KV-S3432U)	
9	4-202-140-03	BRACKET, F		19	*A-1620-049-A	B BOARD, COMPLETE	
10	*A-1624-022-A	F2 BOARD, COMPLETE (KV-S3431A/S3431D)		20	*A-1635-020-A	M2 BOARD, COMPLETE	
	*A-1624-040-A	F2 BOARD, COMPLETE (KV-S3431B/S3433E/S3431K/S3432U)		21	*A-1622-006-A	P1 BOARD, COMPLETE	
11	*4-202-141-01	BRACKET, MAIN		22	*4-202-135-01	BRACKET, J	
12	*A-1642-102-A	D BOARD, COMPLETE		23	*A-1651-054-A	J BOARD, COMPLETE	
13	$\Delta$ 1-439-524-11	TRANSFORMER ASSY, FLYBACK (NX-3000A2)		24	*4-313-732-00	CLIP, HINGE, CIRCUIT BOARD	
14	*A-1640-113-A	D5 BOARD, COMPLETE		25	4-039-608-01	COVER, REAR	
				26	$\Delta$ 4-038-615-01	HOLDER, AC CORD	



## 6-2. PICTURE TUBE

- : BVTP3 x 12 7-685-648-71  
 ■ : BVTP4 x 16 7-685-663-79

The components identified by shading and marked ! are critical for safety.  
 Replace only with the part number specified.



REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
51	X-4030-985-1	CABINET ASSY (WITH BEZEL ASSY)		65	*A-1342-189-A	VM BOARD, COMPLETE	
52	X-4030-983-1	GRILLE (LEFT) ASSY, SPEAKER		66	*A-1638-033-A	C BOARD, COMPLETE	
53	4-202-127-01	PLATE, ORNAMENTAL		67	4-369-318-51	SPRING, TENSION	
54	4-036-881-01	LOCK ASSY, DOOR		68	! 1-406-701-11	COIL, DEMAGNETIZATION	
55	4-202-125-01	DOOR		69	! 1-406-702-11	COIL, DEMAGNETIZATION	
56	4-202-555-01	SHAFT, DOOR		70	4-033-744-01	CLIP	
57	4-202-123-01	WINDOW, ORNAMENTAL		71	1-504-121-21	SPEAKER (SQUAWKER) (5CM)	
58	X-4030-984-1	GRILLE (RIGHT) ASSY, SPEAKER		72	1-504-145-11	SPEAKER (12CM)	
59	X-4030-459-1	DAMPER ASSY		73	4-308-870-00	CLIP, LEAD WIRE	
60	! 8-733-731-05	PICTURE TUBE (M81KVA10X) SD-247		74	1-452-032-00	MAGNET, DISK; 10MM Ø	
61	4-036-188-01	SCREW (M), PT		75	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
62	3-704-495-01	SPACER, DY		76	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
63	! 1-451-393-12	DEFLECTION YOKE (Y34EXA)					
64	! 1-452-616-11	NECK ASSY, PICTURE TUBE (NA-323)					

## ELECTRICAL PARTS LIST

## SECTION 7

The components identified by shading and marked \* are critical for safety.  
Replace only with the part number specified.

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

## CAPACITORS

## COILS

MF : mF, PF : mmF

MMH : mH,  $\mu$ H :

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

## RESISTORS

- All resistors are in ohms
- F : nonflammable

VM

B

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1342-189-A	VM BOARD, COMPLETE *****		Q1705	8-729-017-06	TRANSISTOR 2SC4793	
	4-382-854-11	SCREW (M3X10), P, SW (+)		Q1706	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		< CAPACITOR >		Q1707	8-729-140-96	TRANSISTOR 2SD774-34	
C1701	1-124-119-00	ELECT 330MF	20% 16V	Q1708	8-729-901-59	TRANSISTOR BF199	
C1702	1-102-951-00	CERAMIC 15PF	5% 50V	Q1709	8-729-255-12	TRANSISTOR 2SC2551-0	
C1703	1-102-115-00	CERAMIC 560PF	10% 50V			< RESISTOR >	
C1704	1-161-830-00	CERAMIC 0.0047MF	500V	R1701	1-247-807-31	CARBON 100 5% 1/4W	
C1705	1-124-120-11	ELECT 220MF	20% 16V	R1702	1-249-419-11	CARBON 1.5K 5% 1/4W	
C1706	1-123-935-00	ELECT 33MF	20% 160V	R1703	1-247-807-31	CARBON 100 5% 1/4W	
C1707	1-124-907-11	ELECT 10MF	20% 50V	R1704	1-249-418-11	CARBON 1.2K 5% 1/4W	
C1708	1-101-006-00	CERAMIC 0.047MF	50V	R1705	1-247-736-11	CARBON 56 5% 1/2W F	
C1709	1-110-364-11	MYLAR 0.1MF	10% 200V	R1706	1-249-414-11	CARBON 560 5% 1/4W F	
C1710	1-136-207-11	FILM 0.047MF	10% 250V	R1707	1-249-411-11	CARBON 330 5% 1/4W	
C1711	1-162-318-11	CERAMIC 0.001MF	10% 500V	R1709	1-249-418-11	CARBON 1.2K 5% 1/4W	
C1712	1-124-799-11	ELECT 2.2MF	20% 160V	R1710	1-249-385-11	CARBON 2.2 5% 1/4W F	
C1713	1-162-318-11	CERAMIC 0.001MF	10% 500V	R1711	1-249-432-11	CARBON 18K 5% 1/4W	
C1714	1-136-207-11	FILM 0.047MF	10% 250V	R1712	1-249-435-11	CARBON 33K 5% 1/4W	
C1716	1-124-907-11	ELECT 10MF	20% 50V	R1713	1-249-438-11	CARBON 56K 5% 1/4W	
C1718	1-124-120-11	ELECT 220MF	20% 16V	R1714	1-249-429-11	CARBON 10K 5% 1/4W	
C1719	1-124-907-11	ELECT 10MF	20% 50V	R1715	1-216-476-11	METAL OXIDE 180 5% 3W F	
		< CONNECTOR >		R1716	1-249-417-11	CARBON 1K 5% 1/4W F	
CN1819	*1-568-882-51	PIN, CONNECTOR 7P		R1717	1-249-432-11	CARBON 18K 5% 1/4W	
CN1830	*1-568-878-51	PIN, CONNECTOR 3P		R1718	1-249-412-11	CARBON 390 5% 1/4W	
		< DIODE >		R1719	1-249-419-11	CARBON 1.5K 5% 1/4W	
D1701	8-719-901-33	DIODE 1SS133		R1720	1-249-441-11	CARBON 100K 5% 1/4W	
D1702	8-719-901-33	DIODE 1SS133		R1721	1-249-414-11	CARBON 560 5% 1/4W	
D1703	8-719-901-33	DIODE 1SS133		R1722	1-249-385-11	CARBON 2.2 5% 1/4W F	
D1704	8-719-982-37	DIODE MTZJ-39C		R1723	1-249-429-11	CARBON 10K 5% 1/4W	
D1705	8-719-982-37	DIODE MTZJ-39C		R1724	1-249-436-11	CARBON 39K 5% 1/4W	
D1706	8-719-901-33	DIODE 1SS133		R1725	1-249-416-11	CARBON 820 5% 1/4W	
D1707	8-719-901-33	DIODE 1SS133		R1726	1-249-414-11	CARBON 560 5% 1/4W	
		< COIL >		R1727	1-249-402-11	CARBON 56 5% 1/4W F	
L1702	1-408-418-00	INDUCTOR 56UH		R1729	1-216-451-11	METAL OXIDE 120 5% 2W F	
		< TRANSISTOR >		R1731	1-249-420-11	CARBON 1.8K 5% 1/4W	
Q1701	8-729-119-78	TRANSISTOR 2SC2785-HFE		R1732	1-249-426-11	CARBON 5.6K 5% 1/4W	
Q1702	8-729-173-38	TRANSISTOR 2SA733-K		R1734	1-249-419-11	CARBON 1.5K 5% 1/4W	
Q1703	8-729-017-05	TRANSISTOR 2SA1837				*****	
Q1704	8-729-119-78	TRANSISTOR 2SC2785-HFE				*A-1620-049-A B BOARD, COMPLETE *****	
						< CAPACITOR >	
				C1301	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
				C1302	1-126-101-11	ELECT 100MF	20% 16V

B	P1
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REF.NO.	PART NO.	DESCRIPTION	REMARK
C1303	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1304	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1305	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C1306	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C1307	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1308	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C1309	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C1310	1-126-101-11	ELECT 100MF	20% 16V
C1311	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1312	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C1313	1-104-792-51	ELECT 33MF	20% 16V
C1314	1-126-101-11	ELECT 100MF	20% 16V
C1315	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1316	1-126-101-11	ELECT 100MF	20% 16V
C1317	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1318	1-124-477-11	ELECT 47MF	20% 16V
C1319	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1320	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C1321	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1322	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1323	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1324	1-126-101-11	ELECT 100MF	20% 16V
C1325	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1326	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1327	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1328	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1329	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1330	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1331	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1332	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1333	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V

## &lt; CONNECTOR &gt;

CN0302 \*1-573-299-11 CONNECTOR, BOARD TO BOARD 10P

## &lt; DIODE &gt;

D1301 8-719-914-43 DIODE DAN202K

## &lt; FILTER &gt;

FL1301 1-239-550-41 FILTER, LOW PASS  
 FL1302 1-239-550-41 FILTER, LOW PASS  
 FL1303 1-239-550-41 FILTER, LOW PASS  
 FL1304 1-236-164-11 ENCAPSULATED COMPONENT

## &lt; IC &gt;

IC1301 8-752-357-88 IC CXD2024Q-TL

## &lt; COIL &gt;

L1301 1-408-405-00 INDUCTOR 4.7UH  
 L1302 1-408-403-00 INDUCTOR 3.3UH  
 L1303 1-408-405-00 INDUCTOR 4.7UH  
 L1304 1-408-405-00 INDUCTOR 4.7UH

## &lt; TRANSISTOR &gt;

Q1301 8-729-216-22 TRANSISTOR 2SA1162-G  
 Q1302 8-729-216-22 TRANSISTOR 2SA1162-G  
 Q1303 8-729-216-22 TRANSISTOR 2SA1162-G  
 Q1304 8-729-920-74 TRANSISTOR 2SC2412K-QR  
 Q1305 8-729-920-74 TRANSISTOR 2SC2412K-QR

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1306	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1307	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1308	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1310	8-729-216-22	TRANSISTOR 2SA1162-G	

## &lt; RESISTOR &gt;

R1301	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R1302	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1303	1-216-043-00	METAL GLAZE 560 5%	1/10W
R1304	1-216-043-00	METAL GLAZE 560 5%	1/10W
R1305	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W

R1306	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1307	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R1308	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R1309	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R1310	1-216-295-91	METAL GLAZE 0 5%	1/10W

R1311	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1312	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1313	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1314	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1315	1-216-049-00	METAL GLAZE 1K 5%	1/10W

R1316	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
R1317	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R1318	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R1319	1-216-043-00	METAL GLAZE 560 5%	1/10W
R1320	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W

R1321	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1322	1-216-025-00	METAL GLAZE 100 5%	1/10W
R1324	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R1325	1-216-043-00	METAL GLAZE 560 5%	1/10W
R1326	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W

R1327	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1330	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R1331	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1332	1-216-653-11	METAL CHIP 1.2K 0.50%	1/10W
R1333	1-216-666-11	METAL CHIP 4.3K 0.50%	1/10W

R1334	1-216-635-11	METAL CHIP 220 0.50%	1/10W
R1335	1-216-637-11	METAL CHIP 270 0.50%	1/10W
R1336	1-216-657-11	METAL CHIP 1.8K 0.50%	1/10W
R1337	1-216-663-11	METAL CHIP 3.3K 0.50%	1/10W
R1338	1-216-657-11	METAL CHIP 1.8K 0.50%	1/10W

R1339	1-216-295-91	METAL GLAZE 0 5%	1/10W
R1342	1-216-295-91	METAL GLAZE 0 5%	1/10W
R1343	1-216-035-00	METAL GLAZE 270 5%	1/10W

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\*A-1622-006-A P1 BOARD, COMPLETE  
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## &lt; CAPACITOR &gt;

C1401	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1402	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1403	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C1404	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
C1405	1-163-097-00	CERAMIC CHIP 15PF	5% 50V

C1406	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C1407	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C1408	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
C1409	1-124-903-11	ELECT 1MF	20% 50V
C1410	1-163-038-00	CERAMIC CHIP 0.1MF	25V

P1

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C1411	1-164-005-11	CERAMIC CHIP 0.47MF	25V	< CONNECTOR >			
C1412	1-163-038-00	CERAMIC CHIP 0.1MF	25V	CN1514	*1-568-879-11	PIN, CONNECTOR 4P	
C1414	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	CN1515	*1-564-516-11	PLUG, CONNECTOR 13P	
C1416	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	CN1516	*1-568-879-11	PIN, CONNECTOR 4P	
C1417	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	CN1538	*1-573-299-11	CONNECTOR, BOARD TO BOARD 10P	
C1419	1-164-005-11	CERAMIC CHIP 0.47MF	25V	< DIODE >			
C1420	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D1401	8-719-401-41	DIODE MA3051L-TX	
C1421	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D1403	8-719-914-43	DIODE DAN202K	
C1422	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D1404	8-719-914-42	DIODE DA204K	
C1423	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D1405	8-719-914-42	DIODE DA204K	
C1424	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	< FILTER >			
C1425	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	FL1403	1-236-071-11	ENCAPSULATED COMPONENT	
C1426	1-163-124-00	CERAMIC CHIP 200PF	5% 50V	FL1404	1-236-071-11	ENCAPSULATED COMPONENT	
C1427	1-124-916-11	ELECT 22MF	20% 50V	FL1405	1-236-071-11	ENCAPSULATED COMPONENT	
C1428	1-163-038-00	CERAMIC CHIP 0.1MF	25V	FL1406	1-236-071-11	ENCAPSULATED COMPONENT	
C1430	1-163-038-00	CERAMIC CHIP 0.1MF	25V	FL1407	1-236-071-11	ENCAPSULATED COMPONENT	
C1431	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	FL1408	1-236-071-11	ENCAPSULATED COMPONENT	
C1432	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	< IC >			
C1433	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	IC1401	8-759-073-16	IC TDA9160/N2	
C1434	1-163-038-00	CERAMIC CHIP 0.1MF	25V	IC1402	8-759-086-97	IC TDA4661T/V2	
C1435	1-163-038-00	CERAMIC CHIP 0.1MF	25V	IC1403	8-759-248-15	IC SDA9187-2XGEG	
C1437	1-164-343-11	CERAMIC CHIP 0.056MF	10% 25V	IC1404	8-759-192-90	IC SDA9188-3XGEG	
C1438	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	IC1405	8-759-248-91	IC SDA9086-5	
C1439	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	IC1406	8-759-183-36	IC TDA8443B	
C1440	1-163-245-11	CERAMIC CHIP 56PF	5% 50V	IC1410	8-759-037-45	IC MC78L08ACPRP	
C1441	1-164-005-11	CERAMIC CHIP 0.47MF	25V	IC1411	8-759-708-05	IC NJM78L05A	
C1442	1-164-005-11	CERAMIC CHIP 0.47MF	25V	< COIL >			
C1443	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	L1401	1-408-418-00	INDUCTOR 56UH	
C1444	1-164-005-11	CERAMIC CHIP 0.47MF	25V	L1405	1-408-407-00	INDUCTOR 6.8UH	
C1445	1-164-005-11	CERAMIC CHIP 0.47MF	25V	L1406	1-408-407-00	INDUCTOR 6.8UH	
C1446	1-164-005-11	CERAMIC CHIP 0.47MF	25V	< TRANSISTOR >			
C1447	1-163-038-00	CERAMIC CHIP 0.1MF	25V	Q1401	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1448	1-164-222-11	CERAMIC CHIP 0.22MF	25V	Q1402	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1449	1-163-257-11	CERAMIC CHIP 180PF	5% 50V	Q1403	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1450	1-164-005-11	CERAMIC CHIP 0.47MF	25V	Q1404	8-729-216-22	TRANSISTOR 2SA1162-G	
C1451	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	Q1405	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1452	1-163-038-00	CERAMIC CHIP 0.1MF	25V	Q1406	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1453	1-163-038-00	CERAMIC CHIP 0.1MF	25V	Q1407	8-729-216-22	TRANSISTOR 2SA1162-G	
C1454	1-163-038-00	CERAMIC CHIP 0.1MF	25V	Q1408	8-729-216-22	TRANSISTOR 2SA1162-G	
C1455	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	Q1409	8-729-216-22	TRANSISTOR 2SA1162-G	
C1456	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	Q1413	8-729-216-22	TRANSISTOR 2SA1162-G	
C1457	1-164-005-11	CERAMIC CHIP 0.47MF	25V	Q1414	8-729-900-53	TRANSISTOR DTC114EK	
C1458	1-164-505-11	CERAMIC CHIP 2.2MF	16V	Q1416	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1459	1-164-505-11	CERAMIC CHIP 2.2MF	16V	Q1417	8-729-900-53	TRANSISTOR DTC114EK	
C1460	1-163-038-00	CERAMIC CHIP 0.1MF	25V	Q1418	8-729-900-53	TRANSISTOR DTC114EK	
C1461	1-164-005-11	CERAMIC CHIP 0.47MF	25V	Q1419	8-729-900-53	TRANSISTOR DTC114EK	
C1462	1-164-005-11	CERAMIC CHIP 0.47MF	25V	Q1421	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1463	1-126-101-11	ELECT 100MF	20% 16V	Q1422	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1464	1-126-101-11	ELECT 100MF	20% 16V	Q1425	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1465	1-126-101-11	ELECT 100MF	20% 16V	Q1426	8-729-900-53	TRANSISTOR DTC114EK	
C1466	1-126-101-11	ELECT 100MF	20% 16V	Q1430	8-729-900-53	TRANSISTOR DTC114EK	
C1467	1-126-101-11	ELECT 100MF	20% 16V	Q1431	8-729-901-04	TRANSISTOR DTA114EK	
C1468	1-164-505-11	CERAMIC CHIP 2.2MF	16V				
C1469	1-164-505-11	CERAMIC CHIP 2.2MF	16V				
C1471	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V				
C1472	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V				
C1473	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V				
C1481	1-164-005-11	CERAMIC CHIP 0.47MF	25V				
C1491	1-163-251-11	CERAMIC CHIP 100PF	5% 50V				

The components identified by shading and marked \* are critical for safety.  
Replace only with the part number specified.

P1

F1

F2

REF.NO.	PART NO.	DESCRIPTION	REMARK		
< RESISTOR >					
JR1401	1-216-295-91	METAL GLAZE 0	5%	1/10W	
R1401	1-216-097-00	METAL GLAZE 100K	5%	1/10W	
R1402	1-216-073-00	METAL GLAZE 10K	5%	1/10W	
R1403	1-216-025-00	METAL GLAZE 100	5%	1/10W	
R1404	1-216-025-00	METAL GLAZE 100	5%	1/10W	
R1405	1-216-049-00	METAL GLAZE 1K	5%	1/10W	
R1406	1-216-051-00	METAL GLAZE 1.2K	5%	1/10W	
R1407	1-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
R1408	1-216-041-00	METAL GLAZE 470	5%	1/10W	
R1410	1-216-029-00	METAL GLAZE 150	5%	1/10W	
R1411	1-216-041-00	METAL GLAZE 470	5%	1/10W	
R1412	1-216-041-00	METAL GLAZE 470	5%	1/10W	
R1413	1-216-041-00	METAL GLAZE 470	5%	1/10W	
R1414	1-216-045-00	METAL GLAZE 680	5%	1/10W	
R1415	1-216-045-00	METAL GLAZE 680	5%	1/10W	
R1416	1-216-049-00	METAL GLAZE 1K	5%	1/10W	
R1417	1-216-033-00	METAL GLAZE 220	5%	1/10W	
R1418	1-216-025-00	METAL GLAZE 100	5%	1/10W	
R1419	1-216-027-00	METAL GLAZE 120	5%	1/10W	
R1421	1-216-033-00	METAL GLAZE 220	5%	1/10W	
R1422	1-216-023-00	METAL GLAZE 82	5%	1/10W	
R1424	1-216-041-00	METAL GLAZE 470	5%	1/10W	
R1425	1-216-041-00	METAL GLAZE 470	5%	1/10W	
R1426	1-216-041-00	METAL GLAZE 470	5%	1/10W	
R1427	1-216-041-00	METAL GLAZE 470	5%	1/10W	
R1429	1-216-091-00	METAL GLAZE 56K	5%	1/10W	
R1430	1-216-069-00	METAL GLAZE 6.8K	5%	1/10W	
R1431	1-216-073-00	METAL GLAZE 10K	5%	1/10W	
R1434	1-216-043-00	METAL GLAZE 560	5%	1/10W	
R1435	1-216-073-00	METAL GLAZE 10K	5%	1/10W	
R1436	1-216-043-00	METAL GLAZE 560	5%	1/10W	
R1437	1-216-031-00	METAL GLAZE 180	5%	1/10W	
R1438	1-216-045-00	METAL GLAZE 680	5%	1/10W	
R1439	1-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
R1441	1-216-053-00	METAL GLAZE 1.5K	5%	1/10W	
R1442	1-216-053-00	METAL GLAZE 1.5K	5%	1/10W	
R1443	1-216-053-00	METAL GLAZE 1.5K	5%	1/10W	
R1444	1-216-041-00	METAL GLAZE 470	5%	1/10W	
R1445	1-216-083-00	METAL GLAZE 27K	5%	1/10W	
R1446	1-216-079-00	METAL GLAZE 18K	5%	1/10W	
R1449	1-216-033-00	METAL GLAZE 220	5%	1/10W	
R1450	1-216-033-00	METAL GLAZE 220	5%	1/10W	
R1453	1-216-025-00	METAL GLAZE 100	5%	1/10W	
R1454	1-216-025-00	METAL GLAZE 100	5%	1/10W	
R1455	1-216-081-00	METAL GLAZE 22K	5%	1/10W	
R1456	1-216-081-00	METAL GLAZE 22K	5%	1/10W	
R1457	1-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
R1458	1-216-053-00	METAL GLAZE 1.5K	5%	1/10W	
R1462	1-216-073-00	METAL GLAZE 10K	5%	1/10W	
R1463	1-216-049-00	METAL GLAZE 1K	5%	1/10W	
R1464	1-216-093-00	METAL GLAZE 68K	5%	1/10W	
R1465	1-216-093-00	METAL GLAZE 68K	5%	1/10W	
R1466	1-216-295-91	METAL GLAZE 0	5%	1/10W	
R1468	1-216-049-00	METAL GLAZE 1K	5%	1/10W	
R1469	1-216-049-00	METAL GLAZE 1K	5%	1/10W	
R1471	1-216-037-00	METAL GLAZE 330	5%	1/10W	
R1481	1-216-089-91	METAL GLAZE 47K	5%	1/10W	
R1483	1-216-079-00	METAL GLAZE 18K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK		
R1484	1-216-081-00	METAL GLAZE 22K	5%	1/10W	
R1485	1-216-041-00	METAL GLAZE 470	5%	1/10W	
R1486	1-216-033-00	METAL GLAZE 220	5%	1/10W	
R1487	1-216-033-00	METAL GLAZE 220	5%	1/10W	
R1493	1-216-075-00	METAL GLAZE 12K	5%	1/10W	
R1494	1-216-025-00	METAL GLAZE 100	5%	1/10W	
R1495	1-216-053-00	METAL GLAZE 1.5K	5%	1/10W	
R1496	1-216-065-00	METAL GLAZE 4.7K	5%	1/10W	
R1497	1-216-053-00	METAL GLAZE 1.5K	5%	1/10W	
R1498	1-216-053-00	METAL GLAZE 1.5K	5%	1/10W	
R1499	1-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
< CRYSTAL >					
X1401	1-567-505-11	OSCILLATOR, CRYSTAL			
X1402	1-567-504-11	OSCILLATOR, CRYSTAL			
*****					
*1-648-312-12 F1 BOARD					
*****					
< CONNECTOR >					
CN0003	*1-580-844-11	PIN, CONNECTOR (POWER)			
CN0831	*1-695-292-11	PIN, CONNECTOR (POWER)			
< FUSE >					
F651	*1-576-232-21	FUSE (H.B.C.) 5A/250V			
	1-533-230-11	HOLDER, FUSE (F651)			
< SWITCH >					
S651	*1-571-433-11	SWITCH, PUSH (AC POWER)			
*****					
*A-1624-022-A F2 BOARD, COMPLETE (KV-S3431A/S3431D)					
*****					
*A-1624-040-A F2 BOARD, COMPLETE (KV-S3431B/S3433E/					
***** S3431K/S3432U)					
< CAPACITOR >					
C661	*1-136-519-12	FILM 0.47MF	20%	300V	
C662	*1-136-518-12	FILM 0.33MF	20%	300V	
C664	*1-164-246-61	CERAMIC 0.0022MF	20%	400V	
C666	1-124-920-11	ELECT 330MF	20%	50V	
C667	1-126-337-11	ELECT 22MF	20%	50V	
C672	*1-161-964-91	CERAMIC 0.0047MF		250V	
C673	*1-161-964-91	CERAMIC 0.0047MF		250V	
C674	1-125-555-11	ELECT 330MF	20%	400V	
< CONNECTOR >					
CN0005	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			
CN0006	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			
CN0007	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P			
CN0924	*1-568-878-51	PIN, CONNECTOR 3P			
CN0925	*1-695-294-11	PIN, CONNECTOR (PC BOARD) 6P			
CN0929	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P			
CN0931	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P			
< DIODE >					
D661	8-719-901-33	DIODE 1SS133			
D663	8-719-510-53	DIODE D4S860L			
D664	8-719-109-89	DIODE RD5.6ESB2			

F2

A4

The components identified by shading and marked ! are critical for safety.  
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
< TRANSFORMER >				C1117	1-163-081-00	CERAMIC CHIP 0.22MF	25V
LP661	1-424-436-11	TRANSFORMER, LINE FILTER		C1118	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
LP662	1-424-436-11	TRANSFORMER, LINE FILTER		C1119	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
		(KV-S3431A/S3431D)		C1120	1-163-193-00	CERAMIC CHIP 330PF	5% 50V
< TRANSISTOR >				C1121	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
Q661	8-729-920-74	TRANSISTOR 2SC2412K-QR		C1122	1-163-081-00	CERAMOC CHIP 0.22MF	25V
< RESISTOR >				C1123	1-106-228-00	MYLAR 0.022MF	10% 100V
R663	1-244-945-91	CARBON 1M 5% 1/2W		C1124	1-124-477-11	ELECT 47MF	20% 16V
R664	1-205-998-11	WIREWOUND 1 5% 10W		C1125	1-124-477-11	ELECT 47MF	20% 16V
R665	1-218-265-11	METAL 8.2M 5% 1W		C1126	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
R666	1-249-405-11	CARBON 100 5% 1/4W F		C1127	1-163-038-11	CERAMIC CHIP 0.1MF	25V
R667	1-249-430-11	CARBON 12K 5% 1/4W		C1128	1-124-477-11	ELECT 47MF	20% 16V
R668	1-249-436-11	CARBON 39K 5% 1/4W		C1129	1-163-038-11	CERAMIC CHIP 0.1MF	25V
R669	1-202-968-11	WIREWOUND 1.2 5% 10W		C1130	1-163-205-00	CERAMIC CHIP 0.001MF	10% 50V
R670	1-205-998-11	WIREWOUND 1 5% 10W		C1131	1-163-059-00	CERAMIC CHIP 0.01MF	50V
R671	1-249-417-11	CARBON 1K 5% 1/4W F		C1132	1-163-038-11	CERAMIC CHIP 0.1MF	25V
< RELAY >				C1133	1-124-907-11	ELECT 10MF	20% 50V
RY661	1-515-720-31	RELAY		C1134	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
< THERMISTOR >				C1135	1-163-038-11	CERAMIC CHIP 0.1MF	25V
THP661	1-809-827-11	THERMISTOR, POSITIVE		C1136	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
*****				C1137	1-163-038-11	CERAMIC CHIP 0.1MF	25V
*A-1630-233-A	A4 BOARD, COMPLETE (KV-S3431A/S3431B/ S3431D/S3431K)			C1138	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
*A-1630-236-A	A4 BOARD, COMPLETE (KV-S3433E)			C1139	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
*A-1630-239-A	A4 BOARD, COMPLETE (KV-S3432U)			C1140	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
< FILTER >				C1141	1-163-205-00	CERAMIC CHIP 0.001MF	10% 50V
CF1101	1-409-333-00	TRAP, CERAMIC (6.0MHZ) (KV-S3432U)		C1142	1-163-057-00	CERAMIC CHIP 0.0068MF	50V
CF1102	1-404-134-00	TRAP, CERAMIC (5.5MHZ) (KV-S3433E)		C1143	1-163-003-11	CERAMIC CHIP 330PF	10% 50V
BP1101	1-236-238-11	FILTER, BAND PASS (KV-S3432U)		C1144	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
	1-239-047-11	FILTER, BAND PASS (KV-S3433E)		C1145	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
< CAPACITOR >				C1146	1-163-038-11	CERAMIC CHIP 0.1MF	25V
< C1101 - C1159 (KV-S3433E/S3432U) ONLY >				C1147	1-124-477-11	ELECT 47MF	20% 16V
C1101	1-126-101-11	ELECT 100MF 20% 16V		C1148	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C1102	1-126-101-11	ELECT 100MF 20% 16V		C1149	1-124-477-11	ELECT 47MF	20% 16V
C1103	1-163-077-91	CERAMIC CHIP 0.1MF 50V		C1150	1-163-038-11	CERAMIC CHIP 0.1MF	25V
C1104	1-163-077-00	CERAMIC CHIP 0.1MF 25V		C1151	1-163-038-11	CERAMIC CHIP 0.1MF	25V
C1105	1-164-489-11	CERAMIC CHIP 0.22MF 10% 16V		C1152	1-124-477-11	ELECT 47MF	20% 16V
C1106	1-163-383-11	CERAMIC CHIP 180PF 5% 50V		C1153	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V
C1107	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V		C1154	1-163-038-11	CERAMIC CHIP 0.1MF	25V
C1108	1-163-059-00	CERAMIC CHIP 0.01MF 50V		C1155	1-124-477-11	ELECT 47MF	20% 16V
C1109	1-163-033-00	CERAMIC CHIP 0.022MF 50V		C1156	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1110	1-164-336-11	CERAMIC CHIP 0.33MF 25V		C1157	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1111	1-163-099-11	CERAMIC CHIP 0.001MF 10% 50V		C1158	1-163-038-11	CERAMIC CHIP 0.1MF	25V
C1112	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V		C1159	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1113	1-124-477-11	ELECT 47MF 20% 16V				(KV-S3432U)	
C1114	1-163-038-11	CERAMIC CHIP 0.1MF 25V		C1203	1-124-927-11	ELECT 4.7MF	20% 50V
C1115	1-124-477-11	ELECT 47MF 20% 16V		C1204	1-124-927-11	ELECT 4.7MF	20% 50V
C1116	1-106-228-00	MYLAR 0.022MF 10% 100V		C1205	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
				C1206	1-164-004-11	CERAMIC CHIP 0.0027MF	10% 50V
				C1207	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V
				C1208	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
				C1209	1-124-927-11	ELECT 4.7MF	20% 50V
				C1210	1-124-907-11	ELECT 10MF	20% 50V
				C1211	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
				C1212	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
				C1213	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C1214	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
				C1215	1-124-910-11	ELECT 47MF	20% 50V
				C1216	1-124-927-11	ELECT 4.7MF	20% 50V
				C1217	1-124-927-11	ELECT 4.7MF	20% 50V
				C1218	1-124-927-11	ELECT 4.7MF	20% 50V

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C1219	1-124-927-11	ELECT 4.7MF	20% 50V	< FERRITE BEAD >			
C1220	1-124-927-11	ELECT 4.7MF	20% 50V	< (KV-S3433E/S3432U) ONLY >			
C1221	1-124-927-11	ELECT 4.7MF	20% 50V	FB1101	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C1222	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V	FB1102	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C1223	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V	FB1103	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C1224	1-124-927-11	ELECT 4.7MF	20% 50V	FB1104	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C1225	1-124-927-11	ELECT 4.7MF	20% 50V	FB1105	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
C1226	1-124-910-11	ELECT 47MF	20% 50V	< IC >			
C1227	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V	IC1101	8-759-511-88	IC TDA8732 (KV-S3433E/S3432U)	
C1228	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V	IC1102	8-759-184-28	IC SAA7282-ZP (KV-S3433E/S3432U)	
C1230	1-126-101-11	ELECT 100MF	20% 16V	IC1201	8-759-145-58	IC UPC4558C	
C1231	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC1202	8-759-145-58	IC UPC4558C	
C1232	1-126-101-11	ELECT 100MF	20% 16V	IC1203	8-759-145-58	IC UPC4558C	
C1233	1-164-505-11	CERAMIC CHIP 2.2MF	16V	IC1204	8-759-503-59	IC YM7128	
C1234	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	IC1251	8-759-257-64	IC TDA7317	
C1235	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	< COIL >			
C1236	1-124-927-11	ELECT 4.7MF	20% 50V	L1101	1-408-405-00	INDUCTOR 4.7UH (KV-S3433E/S3432U)	
C1237	1-124-927-11	ELECT 4.7MF	20% 50V	L1102	1-408-405-00	INDUCTOR 4.7UH (KV-S3433E/S3432U)	
C1245	1-163-131-00	CERAMIC CHIP 390PF	10% 50V	L1103	1-410-119-11	INDUCTOR 1MMH (KV-S3433E/S3432U)	
C1246	1-163-131-00	CERAMIC CHIP 390PF	10% 50V	L1104	1-410-119-11	INDUCTOR 1MMH (KV-S3433E/S3432U)	
C1247	1-163-131-00	CERAMIC CHIP 390PF	10% 50V	L1105	1-408-411-00	INDUCTOR 15UH (KV-S3432U)	
C1251	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	L1201	1-408-421-00	INDUCTOR 100UH	
C1252	1-163-010-11	CERAMIC CHIP 0.0012MF	10% 50V	L1202	1-408-421-00	INDUCTOR 100UH	
C1253	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V	L1251	1-408-421-00	INDUCTOR 100UH	
C1254	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V	< TRANSISTOR >			
C1255	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	Q1101	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-S3433E/S3432U)	
C1256	1-163-022-00	CERAMIC CHIP 0.012MF	10% 50V	Q1102	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-S3433E/S3432U)	
C1257	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V	Q1103	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-S3433E/S3432U)	
C1258	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V	Q1104	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-S3433E/S3432U)	
C1259	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	Q1105	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-S3433E/S3432U)	
C1260	1-164-348-11	CERAMIC CHIP 0.12MF	10% 25V	Q1106	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-S3433E/S3432U)	
C1261	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	Q1107	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-S3433E/S3432U)	
C1262	1-163-010-11	CERAMIC CHIP 0.0012MF	10% 50V	Q1108	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-S3433E/S3432U)	
C1263	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V	Q1201	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1264	1-163-014-00	CERAMIC CHIP 0.0027MF	10% 50V	Q1202	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1265	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	< RESISTOR >			
C1266	1-163-022-00	CERAMIC CHIP 0.012MF	10% 50V	< R1101 - R1154 (KV-S3433E/S3432U) ONLY >			
C1267	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V	JR1101	1-216-296-00	METAL GLAZE 0 5% 1/8W (KV-S3433E)	
C1268	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V	JR1102	1-216-296-00	METAL GLAZE 0 5% 1/8W (KV-S3433E/S3432U)	
C1269	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	JR1103	1-216-296-00	METAL GLAZE 0 5% 1/8W (KV-S3433E/S3432U)	
C1270	1-164-348-11	CERAMIC CHIP 0.12MF	10% 25V	JR1104	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-S3433E/S3432U)	
C1271	1-124-916-11	ELECT 22MF	20% 50V	JR1201	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C1272	1-124-910-11	ELECT 47MF	20% 50V	< DIODE >			
C1273	1-124-907-11	ELECT 10MF	20% 50V	D1101	8-719-914-44	DIODE DAP202K (KV-S3433E/S3432U)	
< CONNECTOR >				D1102	8-719-027-70	DIODE 1SV217-TPH3 (KV-S3433E/S3432U)	
CN0201	1-695-300-11	CONNECTOR, BOARD TO BOARD 20P		D1103	8-719-820-71	DIODE 1SV214 (KV-S3433E/S3432U)	
CN0202	*1-564-508-11	PLUG, CONNECTOR 5P		D1201	8-719-914-43	DIODE DAN202K	
CN0203	*1-564-509-11	PLUG, CONNECTOR 6P		D1202	8-719-914-42	DIODE DA204K	
< DIODE >				D1203	8-719-914-42	DIODE DA204K	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R1101	1-216-188-00	METAL GLAZE 390 5%	1/8W	R1207	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1102	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1208	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R1103	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1209	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R1104	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1210	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1105	1-216-005-00	METAL GLAZE 15 5%	1/10W	R1211	1-216-025-00	METAL GLAZE 100 5%	1/10W
R1106	1-216-185-11	METAL GLAZE 300 5%	1/8W	R1212	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1107	1-216-042-00	METAL GLAZE 510 5%	1/10W	R1213	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1108	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R1214	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1109	1-216-202-00	METAL GLAZE 1.5K 5%	1/8W	R1215	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1110	1-216-196-00	METAL GLAZE 820 5%	1/8W	R1216	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R1111	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1217	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1112	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W	R1218	1-216-121-00	METAL GLAZE 1M 5%	1/10W
R1113	1-216-001-00	METAL GLAZE 10 5%	1/10W	R1219	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R1114	1-216-105-00	METAL GLAZE 220K 5%	1/10W	R1220	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R1115	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R1221	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R1116	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1222	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1117	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R1223	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1118	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R1224	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1119	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R1225	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R1120	1-216-232-00	METAL GLAZE 27K 5%	1/8W	R1226	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R1121	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R1227	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R1122	1-216-158-00	METAL GLAZE 22 5%	1/8W	R1228	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1123	1-216-158-00	METAL GLAZE 22 5%	1/8W	R1229	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1124	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R1230	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1125	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R1231	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1126	1-216-218-00	METAL GLAZE 6.8K 5%	1/8W	R1232	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1127	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R1233	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1128	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R1234	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1129	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R1235	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1130	1-216-246-91	METAL GLAZE 100K 5%	1/8W	R1236	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1131	1-216-218-00	METAL GLAZE 6.8K 5%	1/8W	R1237	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1132	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R1238	1-216-045-00	METAL GLAZE 680 5%	1/10W
R1133	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R1240	1-216-025-00	METAL GLAZE 100 5%	1/10W
R1134	1-216-212-00	METAL GLAZE 3.9K 5%	1/8W	R1241	1-216-025-00	METAL GLAZE 100 5%	1/10W
R1135	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R1242	1-216-025-00	METAL GLAZE 100 5%	1/10W
R1136	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R1245	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1137	1-216-095-00	METAL GLAZE 82K 5%	1/10W	R1246	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1138	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R1247	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1139	1-216-005-00	METAL GLAZE 15 5%	1/10W	R1251	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1140	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R1252	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1141	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R1253	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1142	1-216-033-00	METAL GLAZE 220 5%	1/10W	R1254	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1143	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1255	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1144	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1256	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1145	1-216-001-00	METAL GLAZE 10 5%	1/10W	R1257	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1146	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1258	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1147	1-216-045-00	METAL GLAZE 680 5%	1/10W	R1259	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1148	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1260	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1149	1-216-001-00	METAL GLAZE 10 5%	1/10W	R1261	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1150	1-216-045-00	METAL GLAZE 680 5%	1/10W	R1262	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1151	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1263	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1152	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1264	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1153	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R1265	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1154	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1266	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1201	1-216-103-91	METAL GLAZE 180K 5%	1/10W	R1267	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1202	1-216-107-00	METAL GLAZE 270K 5%	1/10W	R1268	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1203	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R1269	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1204	1-216-083-00	METAL GLAZE 27K 5%	1/10W	R1270	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1205	1-216-103-91	METAL GLAZE 180K 5%	1/10W	R1271	1-216-025-00	METAL GLAZE 100 5%	1/10W
R1206	1-216-107-00	METAL GLAZE 270K 5%	1/10W	R1272	1-216-025-00	METAL GLAZE 100 5%	1/10W



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R1273	1-216-025-00	METAL GLAZE 100 5% 1/10W		C226	1-163-007-11	CERAMIC CHIP 680PF 10% 50V	
R1274	1-216-025-00	METAL GLAZE 100 5% 1/10W		C227	1-124-907-11	ELECT 10MF 20% 50V	
R1275	1-216-025-00	METAL GLAZE 100 5% 1/10W					
R1276	1-216-025-00	METAL GLAZE 100 5% 1/10W		C228	1-124-907-11	ELECT 10MF 20% 50V	
R1277	1-216-025-00	METAL GLAZE 100 5% 1/10W		C229	1-124-478-11	ELECT 100MF 20% 25V	
< CRYSTAL >				C230	1-124-478-11	ELECT 100MF 20% 25V	
X1101	1-579-689-21	VIBRATOR, CRYSTAL (KV-S3432U/S3433E)		C231	1-164-346-11	CERAMIC CHIP 1MF 16V	
X1102	1-579-283-11	VIBRATOR, CRYSTAL (KV-S3432U)		C232	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
	1-579-282-21	VIBRATOR, CRYSTAL (KV-S3433E)		C233	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
X1201	1-567-307-11	OSCILLATOR, CRYSTAL (KV-S3432U/S3433E)		C234	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	
*****				C235	1-130-772-00	FILM 0.22MF 5% 63V	
				C236	1-124-618-11	ELECT 2200MF 20% 35V	
				C237	1-124-618-11	ELECT 2200MF 20% 35V	
	*A-1632-205-A	A BOARD, COMPLETE (KV-S3431A/S3431D/ ***** S3431K)		C238	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	
	*A-1632-206-A	A BOARD, COMPLETE (KV-S3431B) *****		C239	1-130-772-00	FILM 0.22MF 5% 63V	
	*A-1632-208-A	A BOARD, COMPLETE (KV-S3433E) *****		C240	1-124-916-11	ELECT 22MF 20% 50V	
	*A-1632-210-A	A BOARD, COMPLETE (KV-S3432U) *****		C241	1-124-916-11	ELECT 22MF 20% 50V	
				C242	1-124-903-11	ELECT 1MF 20% 50V	
	4-200-001-01	HOLDER, IC		C244	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
	4-201-023-01	SPACER, INSULATING		C248	1-163-185-00	CERAMIC CHIP 150PF 5% 50V	
	4-812-134-00	RIVET NYLON, 3.5		C249	1-163-129-00	CERAMIC CHIP 330PF 5% 50V	
< CAPACITOR >				C251	1-124-282-00	ELECT 22MF 20% 16V	
C071	1-126-108-11	ELECT 56MF 20% 16V		C254	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C072	1-124-120-11	ELECT 220MF 20% 16V		C255	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C074	1-163-001-11	CERAMIC CHIP 220PF 10% 50V		C256	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C102	1-126-103-11	ELECT 470MF 20% 16V		C257	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C103	1-163-031-11	CERAMIC CHIP 0.01MF 50V		C299	1-164-337-11	CERAMIC CHIP 2.2MF 16V	
C104	1-124-477-11	ELECT 47MF 20% 16V		C301	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C105	1-124-916-11	ELECT 22MF 20% 50V		C302	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C106	1-124-927-11	ELECT 4.7MF 20% 50V		C303	1-164-337-11	CERAMIC CHIP 2.2MF 16V	
C110	1-124-478-11	ELECT 100MF 20% 25V		C304	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C120	1-163-031-11	CERAMIC CHIP 0.01MF 50V		C305	1-163-096-00	CERAMIC CHIP 13PF 5% 50V	
C201	1-130-489-00	FILM 0.033MF 5% 50V		C306	1-163-097-00	CERAMIC CHIP 15PF 5% 50V	
C202	1-130-489-00	FILM 0.033MF 5% 50V		C307	1-163-017-00	CERAMIC CHIP 0.0047MF 10% 50V	
C203	1-164-005-11	CERAMIC CHIP 0.47MF 25V		C308	1-163-809-11	CERAMIC CHIP 0.047MF 10% 25V	
C204	1-164-005-11	CERAMIC CHIP 0.47MF 25V		C309	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C205	1-124-907-11	ELECT 10MF 20% 50V		C310	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C206	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V		C311	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C207	1-137-613-11	FILM 0.0015MF 2% 100V		C312	1-124-477-11	ELECT 47MF 20% 16V	
C208	1-164-005-11	CERAMIC CHIP 0.47MF 25V		C313	1-163-077-91	CERAMIC CHIP 0.1MF 50V	
C209	1-164-005-11	CERAMIC CHIP 0.47MF 25V		C314	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C210	1-164-005-11	CERAMIC CHIP 0.47MF 25V		C315	1-124-477-11	ELECT 47MF 20% 16V	
C213	1-163-023-00	CERAMIC CHIP 0.015MF 10% 50V		C316	1-163-077-91	CERAMIC CHIP 0.1MF 50V	
C214	1-163-023-00	CERAMIC CHIP 0.015MF 10% 50V		C317	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C215	1-163-809-11	CERAMIC CHIP 0.047MF 10% 25V		C318	1-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C216	1-163-809-11	CERAMIC CHIP 0.047MF 10% 25V		C319	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C217	1-124-925-11	ELECT 2.2MF 20% 50V		C320	1-124-477-11	ELECT 47MF 20% 16V	
C218	1-124-925-11	ELECT 2.2MF 20% 50V		C321	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
C219	1-163-011-11	CERAMIC CHIP 0.0015MF 10% 50V		C322	1-124-916-11	ELECT 22MF 20% 50V	
C220	1-163-011-11	CERAMIC CHIP 0.0015MF 10% 50V		C323	1-163-135-00	CERAMIC CHIP 560PF 5% 50V	
C221	1-124-925-11	ELECT 2.2MF 20% 50V		C324	1-124-477-11	ELECT 47MF 20% 16V	
C222	1-124-925-11	ELECT 2.2MF 20% 50V		C325	1-163-111-00	CERAMIC CHIP 56PF 5% 50V	
C223	1-136-177-00	FILM 1MF 5% 50V		C341	1-163-077-00	CERAMIC CHIP 0.1MF 10% 25V	
C224	1-136-177-00	FILM 1MF 5% 50V		C342	1-163-077-00	CERAMIC CHIP 0.1MF 10% 25V	
C225	1-164-182-11	CERAMIC CHIP 0.0033MF 10% 50V		C343	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
				C344	1-162-638-11	CERAMIC CHIP 1MF 16V	
				C345	1-164-346-11	CERAMIC CHIP 1MF 16V	
				C346	1-124-916-11	ELECT 22MF 20% 50V	
				C347	1-162-638-11	CERAMIC CHIP 1MF 16V	
				C348	1-164-346-11	CERAMIC CHIP 1MF 16V	
				C349	1-164-346-11	CERAMIC CHIP 1MF 16V	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C350	1-124-907-11	ELECT 10MF	20% 50V	CN0104	1-564-511-11	PLUG, CONNECTOR 8P	
C351	1-124-443-00	ELECT 100MF	20% 10V	CN0105	*1-568-880-51	PIN, CONNECTOR 5P	
C353	1-164-346-11	CERAMIC CHIP 1MF	16V	CN0106	*1-568-880-51	PIN, CONNECTOR 5P	
C354	1-164-346-11	CERAMIC CHIP 1MF	16V	CN0107	*1-568-879-11	PIN, CONNECTOR 4P	
C355	1-162-638-11	CERAMIC CHIP 1MF	16V	CN0108	*1-568-878-51	PIN, CONNECTOR 3P	
C356	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V	CN0109	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P	
C357	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V	CN0110	*1-568-882-51	PIN, CONNECTOR 7P	
C358	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V	CN0113	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P	
C359	1-124-907-11	ELECT 10MF	20% 50V	CN0114	*1-568-879-11	PIN, CONNECTOR 4P	
C361	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	CN0115	*1-564-516-11	PLUG, CONNECTOR 13P	
C362	1-130-772-00	FILM 0.22MF	5% 63V	CN0116	*1-568-879-11	PIN, CONNECTOR 4P	
C363	1-124-907-11	ELECT 10MF	20% 50V	CN0119	*1-568-879-11	PIN, CONNECTOR 4P	
C365	1-124-120-11	ELECT 220MF	20% 16V	CN0127	*1-564-509-11	PLUG, CONNECTOR 6P	
C366	1-124-903-11	ELECT 1MF	20% 50V	CN5108	*1-564-513-11	PLUG, CONNECTOR 10P	
C401	1-164-005-11	CERAMIC CHIP 0.47MF	16V	< DIODE >			
C402	1-104-792-51	ELECT 33MF	20% 16V	D068	8-719-914-44	DIODE DAP202K	
C403	1-162-637-11	CERAMIC CHIP 0.47MF	16V	D069	8-719-914-44	DIODE DAP202K	
C411	1-164-005-11	CERAMIC CHIP 0.47MF	25V	D071	8-719-109-89	DIODE RD5.6ESB2	
C412	1-164-005-11	CERAMIC CHIP 0.47MF	25V	D073	8-719-109-89	DIODE RD5.6ESB2	
C421	1-124-477-11	ELECT 47MF	20% 16V	D075	8-719-914-43	DIODE DAN202K	
C422	1-124-477-11	ELECT 47MF	20% 16V	D077	8-719-914-43	DIODE DAN202K	
C423	1-101-004-00	CERAMIC 0.01MF	50V	D078	8-719-109-89	DIODE RD5.6ESB2	
C424	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	D079	8-719-109-89	DIODE RD5.6ESB2	
C425	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	D101	8-719-982-27	DIODE MTZJ-33C	
C426	1-124-477-11	ELECT 47MF	20% 16V	D206	8-719-914-43	DIODE DAN202K	
C427	1-164-346-11	CERAMIC CHIP 1MF	16V	D207	8-719-921-89	DIODE MTZJ-13C	
C428	1-164-346-11	CERAMIC CHIP 1MF	16V	D208	8-719-901-33	DIODE 1SS133	
C429	1-124-119-00	ELECT 330MF	20% 16V	D209	8-719-901-33	DIODE 1SS133	
C574	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	D210	8-719-901-33	DIODE 1SS133	
C575	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V	D211	8-719-901-33	DIODE 1SS133	
C576	1-163-075-00	CERAMIC CHIP 0.047MF	10% 25V	D212	8-719-901-33	DIODE 1SS133	
C581	1-163-031-11	CERAMIC CHIP 0.01MF	50V	D213	8-719-914-43	DIODE DAN202K	
C582	1-124-916-11	ELECT 22MF	20% 50V	D214	8-719-914-42	DIODE DA204K	
C583	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D215	8-719-914-43	DIODE DAN202K (KV-S3431B)	
C585	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	D216	8-719-914-43	DIODE DAN202K (KV-S3431B)	
C586	1-163-063-00	CERAMIC CHIP 0.022MF	10% 50V	D301	8-719-914-43	DIODE DAN202K	
C587	1-124-903-11	ELECT 1MF	20% 50V	D302	8-719-914-44	DIODE DAP202K	
C588	1-164-346-11	CERAMIC CHIP 1MF	16V	D304	8-719-109-89	DIODE RD5.6ESB2	
C589	1-124-478-11	ELECT 100MF	20% 25V	D305	8-719-914-43	DIODE DAN202K	
C590	1-124-916-11	ELECT 22MF	20% 50V	D306	8-719-914-43	DIODE DAN202K	
C591	1-124-925-11	ELECT 2.2MF	20% 50V	D307	8-719-914-43	DIODE DAN202K	
C592	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D308	8-719-914-42	DIODE DA204K	
C593	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V	D311	8-719-914-42	DIODE DA204K	
C595	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	D314	8-719-914-43	DIODE DAN202K	
C599	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D381	8-719-110-03	DIODE DIODE RD7.5ESB2	
C644	1-124-916-11	ELECT 22MF	20% 50V	D401	8-719-921-69	DIODE MTZJ-9.1	
C681	1-124-478-11	ELECT 100MF	20% 25V	D403	8-719-921-69	DIODE MTZJ-9.1	
C682	1-126-516-11	ELECT 120MF	20% 16V	D405	8-719-921-69	DIODE MTZJ-9.1	
C683	1-124-478-11	ELECT 100MF	20% 25V	D406	8-719-921-69	DIODE MTZJ-9.1	
C685	1-124-478-11	ELECT 100MF	20% 25V	D407	8-719-921-69	DIODE MTZJ-9.1	
C686	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D571	8-719-914-42	DIODE DA204K	
C687	1-124-916-11	ELECT 22MF	20% 50V	D681	8-719-921-75	DIODE MTZJ-10B	
< FILTER >				D683	8-719-914-44	DIODE DAP202K	
CF581	1-577-611-11	OSCILALTOR, CERAMIC		< IC >			
< CONNECTOR >				IC072	8-759-184-27	IC ST24C16CB1	
CN0001	*1-568-880-51	PIN, CONNECTOR 5P		IC201	8-759-266-64	IC TDA6612-5 (KV-S3431A/S3431B/ S3431D/S3433E/S3431K)	
CN0102	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P			8-759-266-65	IC TDA6622-5 (KV-S3432U)	
CN0103	1-564-511-11	PLUG, CONNECTOR 8P					

The components identified by shading and marked  $\Delta$  are critical for safety.  
Replace only with the part number specified.

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
IC202	8-759-502-21	IC TDA2822M		Q312	8-729-900-53	TRANSISTOR DTC114EK	
IC251	8-759-072-99	IC TDA2052		Q313	8-729-216-22	TRANSISTOR 2SA1162-G	
IC261	8-759-072-99	IC TDA2052		Q317	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC301	8-759-189-90	IC TDA9145/N2B		Q401	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC302	8-759-084-91	IC TDA4661/V2		Q402	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC304	8-752-056-54	IC CXA1587S		Q403	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC401	8-752-068-46	IC CXA1855S (KV-S3431A/S3431D/ S3433E/S3431K/S3432U)		Q404	8-729-920-74	TRANSISTOR 2SC2412K-QR	
	8-752-067-28	IC CXA1545AS (KV-S3431B)		Q581	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC402	8-759-073-00	IC TEA2114		Q582	8-729-216-22	TRANSISTOR 2SA1162-G	
IC681	8-759-072-98	IC TDA8138A		Q583	8-729-920-74	TRANSISTOR 2SC2412K-QR	
	4-202-373-01	SPRING, IC (IC681)		Q610	8-729-140-97	TRANSISTOR 2SB734-34	
IC684	8-759-701-59	IC NJM78M09FA		Q681	8-729-109-53	TRANSISTOR 2SD795A-P	
IC685	8-759-510-52	IC TEA7605		Q682	8-729-900-53	TRANSISTOR DTC114EK	
< IF BLOCK >				< RESISTOR >			
IFB101	1-466-733-11	IF BLOCK (IFH-389) (KV-S3431A/S3431D/ S3433E/S3431K)		JR102	1-216-295-91	METAL GLAZE 0 5% 1/10W	
	1-466-735-11	IF BLOCK (IFH-389F) (KV-S3431B)		JR104	1-216-295-91	METAL GLAZE 0 5% 1/10W	
	1-466-734-11	IF BLOCK (IFH-395) (KV-S3432U)		JR107	1-216-295-91	METAL GLAZE 0 5% 1/10W	
				JR110	1-216-295-91	METAL GLAZE 0 5% 1/10W	
				JR111	1-216-295-91	METAL GLAZE 0 5% 1/10W	
< COIL >				JR112	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L101	1-412-546-41	INDUCTOR 560UH		JR113	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L102	1-408-413-00	INDUCTOR 22UH		JR114	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L201	1-407-500-00	INDUCTOR 4.7MMH		JR115	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L306	1-408-405-00	INDUCTOR 4.7UH		JR116	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L307	1-408-405-00	INDUCTOR 4.7UH		JR117	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L309	1-408-411-00	INDUCTOR 15UH		JR118	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L310	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		JR119	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L575	1-408-397-00	INDUCTOR 1UH		JR120	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L611	1-412-539-41	INDUCTOR 150UH		JR121	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L681	1-412-539-41	INDUCTOR 150UH		JR122	1-216-295-91	METAL GLAZE 0 5% 1/10W	
< IC LINK >				JR123	1-216-295-91	METAL GLAZE 0 5% 1/10W	
PS681 $\Delta$	1-532-605-91	LINK, IC 0.4A (ICP-N15)		JR124	1-216-295-91	METAL GLAZE 0 5% 1/10W	
PS682 $\Delta$	1-532-605-91	LINK, IC 0.4A (ICP-N15)		JR125	1-216-295-91	METAL GLAZE 0 5% 1/10W	
< TRANSISTOR >				JR126	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q071	8-729-901-05	TRANSISTOR DTA124EK		JR127	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q101	8-729-216-22	TRANSISTOR 2SA1162-G		JR128	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q102	8-729-901-00	TRANSISTOR DTC124EK		JR129	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q103	8-729-900-53	TRANSISTOR DTC114EK		JR130	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q201	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR131	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q202	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR132	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q203	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR133	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q204	8-729-216-22	TRANSISTOR 2SA1162-G		JR134	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q205	8-729-216-22	TRANSISTOR 2SA1162-G		JR135	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q206	8-729-216-22	TRANSISTOR 2SA1162-G		JR136	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q207	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR137	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q209	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR138	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q210	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR139	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q301	8-729-901-00	TRANSISTOR DTC124EK		JR140	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q302	8-729-216-22	TRANSISTOR 2SA1162-G		JR141	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q303	8-729-216-22	TRANSISTOR 2SA1162-G		JR142	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q304	8-729-900-53	TRANSISTOR DTC114EK		JR143	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q305	8-729-900-53	TRANSISTOR DTC114EK		JR144	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q306	8-729-216-22	TRANSISTOR 2SA1162-G		JR149	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q308	8-729-216-22	TRANSISTOR 2SA1162-G		JR150	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q309	8-729-931-02	TRANSISTOR 2SC2413KQ		JR151	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q311	8-729-901-06	TRANSISTOR DTA144EK		JR152	1-216-296-91	METAL GLAZE 0 5% 1/8W	
				JR201	1-216-296-91	METAL GLAZE 0 5% 1/8W	
				JR202	1-216-296-91	METAL GLAZE 0 5% 1/8W	
				JR203	1-216-296-91	METAL GLAZE 0 5% 1/8W	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
JR204	1-216-296-91	METAL GLAZE 0	5% 1/8W	R115	1-216-210-00	METAL GLAZE 3.3K 5%	1/8W
JR205	1-216-296-91	METAL GLAZE 0	5% 1/8W	R201	1-216-653-11	METAL CHIP 1.2K 0.50%	1/10W
JR206	1-216-296-91	METAL GLAZE 0	5% 1/8W	R202	1-216-653-11	METAL CHIP 1.2K 0.50%	1/10W
JR207	1-216-296-91	METAL GLAZE 0	5% 1/8W	R203	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
JR208	1-216-296-91	METAL GLAZE 0	5% 1/8W				
JR209	1-216-296-91	METAL GLAZE 0	5% 1/8W	R204	1-216-091-00	METAL GLAZE 56K 5%	1/10W
JR210	1-216-296-91	METAL GLAZE 0	5% 1/8W	R205	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
JR211	1-216-296-91	METAL GLAZE 0	5% 1/8W	R206	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
JR212	1-216-296-91	METAL GLAZE 0	5% 1/8W	R207	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
JR213	1-216-296-91	METAL GLAZE 0	5% 1/8W	R208	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
JR214	1-216-296-91	METAL GLAZE 0	5% 1/8W	R209	1-249-377-11	CARBON 0.47 5%	1/4W F
JR215	1-216-296-91	METAL GLAZE 0	5% 1/8W	R210	1-247-734-11	CARBON 39 5%	1/2W
JR216	1-216-296-91	METAL GLAZE 0	5% 1/8W	R211	1-247-734-11	CARBON 39 5%	1/2W
JR217	1-216-296-91	METAL GLAZE 0	5% 1/8W	R212	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR218	1-216-296-91	METAL GLAZE 0	5% 1/8W	R213	1-216-073-00	METAL GLAZE 10K 5%	1/10W
JR219	1-216-296-91	METAL GLAZE 0	5% 1/8W	R214	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR220	1-216-296-91	METAL GLAZE 0	5% 1/8W	R215	1-216-073-00	METAL GLAZE 10K 5%	1/10W
JR221	1-216-296-91	METAL GLAZE 0	5% 1/8W	R216	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR222	1-216-296-91	METAL GLAZE 0	5% 1/8W	R217	1-216-045-00	METAL GLAZE 680 5%	1/10W
JR223	1-216-296-91	METAL GLAZE 0	5% 1/8W	R218	1-216-081-00	METAL GLAZE 22K 5%	1/10W
JR224	1-216-296-91	METAL GLAZE 0	5% 1/8W	R221	1-212-849-00	FUSIBLE 4.7 5%	1/4W F
JR225	1-216-296-91	METAL GLAZE 0	5% 1/8W	R222	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR226	1-216-296-91	METAL GLAZE 0	5% 1/8W	R223	1-216-045-00	METAL GLAZE 680 5%	1/10W
JR227	1-216-296-91	METAL GLAZE 0	5% 1/8W	R224	1-249-433-11	CARBON 22K 5%	1/4W
JR228	1-216-296-91	METAL GLAZE 0	5% 1/8W	R225	1-212-849-00	FUSIBLE 4.7 5%	1/4W F
JR230	1-216-296-91	METAL GLAZE 0	5% 1/8W	R226	1-249-412-11	CARBON 390 5%	1/4W
JR231	1-216-296-91	METAL GLAZE 0	5% 1/8W	R227	1-216-081-00	METAL GLAZE 22K 5%	1/10W
JR232	1-216-296-91	METAL GLAZE 0	5% 1/8W	R228	1-216-081-00	METAL GLAZE 22K 5%	1/10W
JR233	1-216-296-91	METAL GLAZE 0	5% 1/8W	R229	1-216-039-00	METAL GLAZE 390 5%	1/10W
JR234	1-216-296-91	METAL GLAZE 0	5% 1/8W	R230	1-216-246-91	METAL GLAZE 100K 5%	1/8W
JR235	1-216-296-91	METAL GLAZE 0	5% 1/8W	R231	1-216-097-00	METAL GLAZE 100K 5%	1/10W
JR236	1-216-296-91	METAL GLAZE 0	5% 1/8W	R232	1-216-081-00	METAL GLAZE 22K 5%	1/10W
JR237	1-216-296-91	METAL GLAZE 0	5% 1/8W	R233	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
JR238	1-216-296-91	METAL GLAZE 0	5% 1/8W	R234	1-216-077-00	METAL GLAZE 15K 5%	1/10W
JR240	1-216-296-91	METAL GLAZE 0	5% 1/8W	R235	1-216-073-00	METAL GLAZE 10K 5%	1/10W
JR241	1-216-296-91	METAL GLAZE 0	5% 1/8W	R236	1-216-081-00	METAL GLAZE 22K 5%	1/10W
JR242	1-216-296-91	METAL GLAZE 0	5% 1/8W	R237	1-216-025-00	METAL GLAZE 100 5%	1/10W
JR243	1-216-296-91	METAL GLAZE 0	5% 1/8W	R238	1-216-025-00	METAL GLAZE 100 5%	1/10W
JR245	1-216-296-91	METAL GLAZE 0	5% 1/8W	R241	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
JR247	1-216-296-91	METAL GLAZE 0	5% 1/8W	R242	1-216-214-00	METAL GLAZE 4.7K 5%	1/8W
JR248	1-216-296-91	METAL GLAZE 0	5% 1/8W	R244	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
JR250	1-216-296-91	METAL GLAZE 0	5% 1/8W	R245	1-216-089-91	METAL GLAZE 47K 5%	1/10W
JR251	1-216-296-91	METAL GLAZE 0	5% 1/8W	R246	1-216-097-00	METAL GLAZE 100K 5%	1/10W
JR252	1-216-296-91	METAL GLAZE 0	5% 1/8W	R247	1-216-073-00	METAL GLAZE 10K 5%	1/10W
JR253	1-216-296-91	METAL GLAZE 0	5% 1/8W	R248	1-216-073-00	METAL GLAZE 10K 5%	1/10W
JR254	1-216-296-91	METAL GLAZE 0	5% 1/8W	R249	1-216-045-00	METAL GLAZE 680 5%	1/10W
JR255	1-216-296-91	METAL GLAZE 0	5% 1/8W	R250	1-216-095-00	METAL GLAZE 82K 5%	1/10W
JR271	1-216-295-91	METAL GLAZE 0	5% 1/10W	R251	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
JR272	1-216-295-91	METAL GLAZE 0	5% 1/10W	R252	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R071	1-216-041-00	METAL GLAZE 470 5%	1/10W	R253	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R072	1-216-033-00	METAL GLAZE 220 5%	1/10W	R254	1-216-252-00	METAL GLAZE 180K 5%	1/8W
R073	1-216-033-00	METAL GLAZE 220 5%	1/10W	R255	1-216-252-00	METAL GLAZE 180K 5%	1/8W
R074	1-216-198-91	METAL GLAZE 1K 5%	1/8W	R256	1-249-409-11	CARBON 220 5%	1/4W
R076	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R257	1-249-409-11	CARBON 220 5%	1/4W
R077	1-216-025-00	METAL GLAZE 100 5%	1/10W	R258	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R101	1-216-025-00	METAL GLAZE 100 5%	1/10W	R259	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R102	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R260	1-216-212-00	METAL GLAZE 3.9K 5%	1/8W
R103	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R295	1-216-295-91	METAL GLAZE 0 5%	1/10W
R105	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R296	1-216-037-00	METAL GLAZE 330 5%	1/10W
R108	1-216-230-00	METAL GLAZE 22K 5%	1/8W				(KV-S3431B)

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R297	1-216-027-00	METAL GLAZE 120 5% 1/10W (KV-S3431B)		R370	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R301	1-216-041-00	METAL GLAZE 470 5% 1/10W		R371	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R302	1-216-041-00	METAL GLAZE 470 5% 1/10W		R373	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R303	1-216-174-00	METAL GLAZE 100 5% 1/8W		R376	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
				R377	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R304	1-216-174-00	METAL GLAZE 100 5% 1/8W		R378	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R305	1-216-035-00	METAL GLAZE 270 5% 1/10W		R379	1-216-206-00	METAL GLAZE 2.2K 5% 1/8W	
R306	1-216-035-00	METAL GLAZE 270 5% 1/10W		R380	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R307	1-216-075-00	METAL GLAZE 12K 5% 1/10W		R381	1-216-164-00	METAL GLAZE 39 5% 1/8W	
R308	1-216-121-00	METAL GLAZE 1M 5% 1/10W		R382	1-216-164-00	METAL GLAZE 39 5% 1/8W	
R309	1-216-001-00	METAL GLAZE 10 5% 1/10W		R383	1-216-164-00	METAL GLAZE 39 5% 1/8W	
R310	1-216-001-00	METAL GLAZE 10 5% 1/10W		R384	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R311	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R391	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R312	1-249-413-11	CARBON 470 5% 1/4W		R392	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R313	1-216-081-00	METAL GLAZE 22K 5% 1/10W		R393	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R314	1-249-409-11	CARBON 220 5% 1/4W		R394	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R315	1-249-409-11	CARBON 220 5% 1/4W		R395	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R316	1-216-085-00	METAL GLAZE 33K 5% 1/10W		R396	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R317	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R401	1-216-171-00	METAL GLAZE 75 5% 1/8W	
R318	1-216-041-00	METAL GLAZE 470 5% 1/10W		R402	1-216-158-00	METAL GLAZE 22 5% 1/8W	
R319	1-249-413-11	CARBON 470 5% 1/4W		R403	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R320	1-216-174-00	METAL GLAZE 100 5% 1/8W		R404	1-216-158-00	METAL GLAZE 22 5% 1/8W	
R321	1-216-039-00	METAL GLAZE 390 5% 1/10W		R405	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R322	1-216-041-00	METAL GLAZE 470 5% 1/10W		R406	1-216-158-00	METAL GLAZE 22 5% 1/8W	
R324	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R407	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R325	1-216-041-00	METAL GLAZE 470 5% 1/10W		R408	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R326	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R410	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R328	1-216-025-00	METAL GLAZE 100 5% 1/10W		R411	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R329	1-216-023-00	METAL GLAZE 82 5% 1/10W		R412	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R330	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W		R413	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R331	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R414	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R333	1-216-182-00	METAL GLAZE 220 5% 1/8W		R416	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R334	1-216-182-00	METAL GLAZE 220 5% 1/8W		R417	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R336	1-216-029-00	METAL GLAZE 150 5% 1/10W		R419	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R337	1-216-041-00	METAL GLAZE 470 5% 1/10W		R420	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R338	1-216-035-00	METAL GLAZE 270 5% 1/10W		R423	1-216-015-00	METAL GLAZE 39 5% 1/10W	
R339	1-216-025-00	METAL GLAZE 100 5% 1/10W		R424	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R340	1-216-025-00	METAL GLAZE 100 5% 1/10W		R425	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R341	1-216-025-00	METAL GLAZE 100 5% 1/10W		R426	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R342	1-216-033-00	METAL GLAZE 220 5% 1/10W		R427	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R343	1-216-022-00	METAL GLAZE 75 5% 1/10W		R428	1-249-393-11	CARBON 10 5% 1/4W F	
R344	1-216-022-00	METAL GLAZE 75 5% 1/10W		R572	1-216-198-91	METAL GLAZE 1K 5% 1/8W	
R345	1-216-171-00	METAL GLAZE 75 5% 1/8W		R574	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R346	1-216-022-00	METAL GLAZE 75 5% 1/10W		R575	1-216-186-00	METAL GLAZE 330 5% 1/8W	
R347	1-216-083-00	METAL GLAZE 27K 5% 1/10W		R577	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R351	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R578	1-216-238-91	METAL GLAZE 47K 5% 1/8W	
R352	1-216-033-00	METAL GLAZE 220 5% 1/10W		R580	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R354	1-216-033-00	METAL GLAZE 220 5% 1/10W		R581	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R355	1-216-033-00	METAL GLAZE 220 5% 1/10W		R582	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R356	1-216-033-00	METAL GLAZE 220 5% 1/10W		R583	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R357	1-216-041-00	METAL GLAZE 470 5% 1/10W		R584	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R358	1-216-031-00	METAL GLAZE 180 5% 1/10W		R585	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R359	1-216-033-00	METAL GLAZE 220 5% 1/10W		R586	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R360	1-216-033-00	METAL GLAZE 220 5% 1/10W		R587	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R361	1-216-033-00	METAL GLAZE 220 5% 1/10W		R588	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R362	1-216-077-00	METAL GLAZE 15K 5% 1/10W		R589	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R365	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R590	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R367	1-216-296-91	METAL GLAZE 0 5% 1/8W		R591	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R368	1-216-033-00	METAL GLAZE 220 5% 1/10W		R592	1-216-232-00	METAL GLAZE 27K 5% 1/8W	
R369	1-216-033-00	METAL GLAZE 220 5% 1/10W		R593	1-216-673-11	METAL CHIP 8.2K 0.50% 1/10W	

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IF ( KV-S3431A/S3431D/  
KV-S3433E/S3431K )

REF.NO.	PART NO.	DESCRIPTION	REMARK
R594	1-216-663-11	METAL CHIP 3.3K 0.50% 1/10W	
R595	1-216-643-11	METAL CHIP 470 0.50% 1/10W	
R596	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R597	1-216-230-00	METAL GLAZE 22K 5% 1/8W	
R598	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R600	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R616	1-216-184-00	METAL GLAZE 270 5% 1/8W	
R619	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R628	1-249-413-11	CARBON 470 5% 1/4W	
R632	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R681	1-216-541-00	METAL OXIDE 4.3 5% 3W F	
R682	1-249-415-11	CARBON 680 5% 1/4W	
R683	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2219	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R2220	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R2221	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R2222	1-216-174-00	METAL GLAZE 100 5% 1/8W	
< TUNER >			
TU101	1-693-185-11	TUNER (UV916H) (KV-S3431A/S3431B/ S3431D/S3433E/S3431K)	
	1-693-184-11	TUNER (U944C) (KV-S3432U)	
< CRYSTAL >			
X301	1-567-504-11	OSCILLATOR, CRYSTAL	
X302	1-567-505-11	OSCILLATOR, CRYSTAL	
*****			
	1-466-733-11	IF BLOCK (IFH-389) (KV-S3431A/S3431D/ S3433E/S3431K)	
< CAPACITOR >			
C101	1-163-121-00	CERAMIC CHIP 150PF 5% 50V	
C102	1-164-222-11	CERAMIC CHIP 0.22MF 25V	
C103	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C104	1-164-232-11	CERAMIC CHIP 0.01F 10% 50V	
C105	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C106	1-124-477-11	ELECT 47MF 20% 16V	
C107	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C108	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C109	1-164-232-11	CERAMIC CHIP 0.01F 10% 50V	
C112	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C113	1-164-101-00	CERAMIC CHIP 22PF 5% 50V	
C114	1-124-477-11	ELECT 47MF 20% 16V	
C115	1-164-232-11	CERAMIC CHIP 0.01F 10% 50V	
C116	1-164-346-11	CERAMIC CHIP 1MF 16V	
C118	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C119	1-163-369-11	CERAMIC CHIP 47PFF 5% 25V	
C121	1-163-235-11	CERAMOC CHIP 22PF 5% 50V	
C122	1-164-239-11	CERAMIC CHIP 33PF 5% 50V	
C123	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
C124	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C130	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C131	1-163-093-00	CERAMIC CHIP 10PF 5% 50V	
C133	1-124-477-11	ELECT 47MF 20% 16V	
C152	1-164-337-11	CERAMIC CHIP 2.2MF 16V	
C153	1-164-337-11	CERAMIC CHIP 2.2MF 16V	
C154	1-164-337-11	CERAMIC CHIP 2.2MF 16V	
C155	1-164-232-11	CERAMIC CHIP 0.01F 10% 50V	
C156	1-124-477-11	ELECT 47MF 20% 16V	

REF.NO.	PART NO.	DESCRIPTION	REMARK
C161	1-164-117-00	CERAMIC CHIP 100PF 5% 50V	
C162	1-164-222-11	CERAMIC CHIP 0.22MF 25V	
C163	1-164-346-11	CERAMIC CHIP 1MF 16V	
C164	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C165	1-164-232-11	CERAMIC CHIP 0.01F 10% 50V	
C166	1-124-477-11	ELECT 47MF 20% 16V	
C167	1-163-213-00	CERAMIC CHIP 0.0022MF 5% 50V	
C168	1-164-346-11	CERAMIC CHIP 1MF 16V	
C170	1-124-477-11	ELECT 47MF 20% 16V	
C171	1-124-477-11	ELECT 47MF 20% 16V	
C173	1-124-477-11	ELECT 47MF 20% 16V	
< FILTER >			
CF2	1-527-839-00	FILTER, CERAMIC	
CF3	1-527-840-00	FILTER, CERAMIC	
CF4	1-567-570-00	FILTER, CERAMIC	
SWF1	1-579-658-11	FILTER, SAWTOOTH WAVE	
< CONNECTOR >			
CN1	1-750-173-11	PIN, CONNECTOR (PC BOARD) 10P	
CN2	1-750-173-11	PIN, CONNECTOR (PC BOARD) 10P	
< TRIMMER >			
CT1	1-404-801-11	TRAP, CERAMIC	
< DIODE >			
D161	8-719-400-18	DIODE MA152WK	
< IC >			
IC1	8-759-070-76	IC M52308SP	
IC2	8-759-070-71	IC TDA9820	
IC3	8-759-514-54	IC BA7046	
< COIL >			
L101	1-408-421-00	INDUCTOR 100UH	
L102	1-408-419-00	INDUCTOR 68UH	
L103	1-408-419-00	INDUCTOR 68UH	
L104	1-408-408-00	INDUCTOR 8.2UH	
L121	1-408-413-00	INDUCTOR 22UH	
L122	1-408-420-00	INDUCTOR 82UH	
L142	1-408-790-00	INDUCTOR 0.56UH	
L151	1-408-419-00	INDUCTOR 68UH	
L161	1-408-419-00	INDUCTOR 68UH	
< TRANSISTOR >			
Q101	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q102	8-729-216-22	TRANSISTOR 2SA1162-G	
Q121	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q122	8-729-216-22	TRANSISTOR 2SA1162-G	
Q161	8-729-216-22	TRANSISTOR 2SA1162-G	
Q170	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q171	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q172	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q173	8-729-920-74	TRANSISTOR 2SC2412K-QR	
< RESISTOR >			
JR2	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR3	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR4	1-216-295-00	METAL GLAZE 0 5% 1/10W	

IF ( KV-S3431A/S3431D/  
KV-S3433E/S3431K )

IF ( KV-S3431B )

REF.NO.	PART NO.	DESCRIPTION	REMARK		
JR7	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR8	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR9	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR11	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR14	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR16	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR18	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR19	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR20	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR21	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR23	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR24	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR25	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR29	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR30	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR33	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR38	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR39	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR40	1-216-296-00	METAL GLAZE	0	5%	1/8
R101	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R102	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R103	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R104	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R106	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R107	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R108	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R110	1-216-041-00	METAL GLAZE	470	5%	1/10W
R113	1-216-031-00	METAL GLAZE	180	5%	1/10W
R114	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R115	1-216-027-00	METAL GLAZE	120	5%	1/10W
R116	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R117	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R118	1-216-117-00	METAL GLAZE	680K	5%	1/10W
R119	1-216-240-00	METAL GLAZE	56K	5%	1/8W
R120	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R121	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R122	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R123	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R124	1-216-041-00	METAL GLAZE	470	5%	1/10W
R125	1-216-041-00	METAL GLAZE	470	5%	1/10W
R127	1-216-047-00	METAL GLAZE	820	5%	1/10W
R130	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R131	1-216-025-00	METAL GLAZE	100	5%	1/10W
R132	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R133	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R134	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R135	1-216-198-00	METAL GLAZE	1K	5%	1/8W
R150	1-216-043-00	METAL GLAZE	560	5%	1/10W
R151	1-216-043-00	METAL GLAZE	560	5%	1/10W
R152	1-216-043-00	METAL GLAZE	560	5%	1/10W
R153	1-216-025-00	METAL GLAZE	100	5%	1/10W
R154	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R155	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R156	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R157	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R159	1-216-107-00	METAL GLAZE	270K	5%	1/10W
R160	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R161	1-216-755-11	METAL CHIP	130K	0.50%	1/10W
R162	1-216-073-00	METAL GLAZE	10K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK		
R163	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R164	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R165	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R166	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R167	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R168	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R169	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R170	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R171	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R172	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R173	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R174	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R175	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R176	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R177	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R178	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R179	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R180	1-216-037-00	METAL GLAZE	330	5%	1/10W
R181	1-216-037-00	METAL GLAZE	330	5%	1/10W
< VARIABLE RESISTOR >					
RV1	1-241-121-11	RES, ADJ, CARBON 4.7K			
< TRANSFORMER >					
T4	1-416-017-21	COIL			
T5	1-416-018-21	COIL			
*****					
	1-466-735-11	IF BLOCK (IFH-389F) (KV-S3431B)			
*****					
< CAPACITOR >					
C1	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	
C2	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C3	1-124-903-11	ELECT 1MF	20%	50V	
C4	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C5	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C6	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	
C7	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C8	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	
C9	1-124-916-11	ELECT 22MF	20%	25V	
C10	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C11	1-124-477-11	ELECT 47MF	20%	16V	
C13	1-163-059-00	CERAMIC CHIP 0.01MF	10%	50V	
C14	1-124-477-11	ELECT 47MF	20%	16V	
C15	1-124-903-11	ELECT 1MF	20%	50V	
C16	1-163-061-00	CERAMIC CHIP 0.015MF	10%	50V	
C17	1-162-638-11	CERAMIC CHIP 1MF		16V	
C18	1-162-638-11	CERAMIC CHIP 1MF		16V	
C19	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C20	1-124-902-00	ELECT 0.47MF	20%	50V	
C21	1-124-903-11	ELECT 1MF	20%	50V	
C22	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C23	1-124-902-00	ELECT 0.47MF	20%	50V	
C24	1-164-506-11	CERAMIC CHIP 4.7MF		16V	
C25	1-124-477-11	ELECT 47MF	20%	16V	
C26	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C27	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C28	1-124-477-11	ELECT 47MF	20%	16V	
C33	1-124-907-11	ELECT 10MF	20%	50V	



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IF ( KV-S3431B )

IF ( KV-S3432U )

REF.NO.	PART NO.	DESCRIPTION	REMARK
R45	1-216-041-00	METAL GLAZE 470 5%	1/10W
R46	1-216-031-00	METAL GLAZE 180 5%	1/10W
R47	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R48	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R49	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R53	1-216-082-00	METAL GLAZE 24K 5%	1/10W
R54	1-216-043-00	METAL GLAZE 560 5%	1/10W
R55	1-216-043-00	METAL GLAZE 560 5%	1/10W
R56	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R57	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R58	1-216-041-00	METAL GLAZE 470 5%	1/10W
R59	1-216-043-00	METAL GLAZE 560 5%	1/10W
R60	1-216-043-00	METAL GLAZE 560 5%	1/10W
R61	1-216-295-00	METAL GLAZE 0 5%	1/10W
R63	1-216-043-00	METAL GLAZE 560 5%	1/10W
R71	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R72	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R73	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R74	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R75	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R76	1-216-025-00	METAL GLAZE 100 5%	1/10W
R77	1-216-174-00	METAL GLAZE 100 5%	1/8W
R81	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R82	1-216-121-00	METAL GLAZE 1M 5%	1/10W
R83	1-216-025-00	METAL GLAZE 100 5%	1/10W
R84	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R85	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R86	1-216-689-00	METAL GLAZE 39K 5%	1/10W
R87	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R88	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R89	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R90	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R91	1-216-295-00	METAL GLAZE 0 5%	1/10W
R92	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R93	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R94	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R95	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R96	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R97	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R98	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R99	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R100	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R102	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R103	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R104	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R105	1-216-033-00	METAL GLAZE 220 5%	1/10W
R121	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R122	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R123	1-216-041-00	METAL GLAZE 470 5%	1/10W
R124	1-216-041-00	METAL GLAZE 470 5%	1/10W
R125	1-216-041-00	METAL GLAZE 470 5%	1/10W
R301	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R302	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R303	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R304	1-216-037-00	METAL GLAZE 330 5%	1/10W
R305	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R306	1-216-025-00	METAL GLAZE 100 5%	1/10W
R307	1-216-037-00	METAL GLAZE 330 5%	1/10W
R308	1-216-037-00	METAL GLAZE 330 5%	1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK
		< VARIABLE RESISTOR >	
RV2	1-241-120-11	RES, ADJ, CARBON 2.2K	
		< TRANSFORMER >	
T1	1-404-806-21	COIL	
T3	1-416-012-11	COIL	
T4	1-416-012-11	COIL	
T5	1-402-720-11	COIL	
		< CRYSTAL >	
X1	1-579-648-21	VIBRATOR, CERAMIC	
		*****	
	1-466-734-11	IF BLOCK (IFH-395) (KV-S3432U)	
		*****	
		< CAPACITOR >	
C101	1-163-239-11	CERAMIC CHIP 33PF	5% 50V
C102	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C103	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C104	1-164-232-11	CERAMIC CHIP 0.01F	10% 50V
C105	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C106	1-124-477-11	ELECT 47MF	20% 16V
C107	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C108	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C109	1-164-232-11	CERAMIC CHIP 0.01F	10% 50V
C112	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C113	1-164-101-00	CERAMIC CHIP 22PF	5% 50V
C114	1-124-477-11	ELECT 47MF	20% 16V
C115	1-164-232-11	CERAMIC CHIP 0.01F	10% 50V
C116	1-164-346-11	CERAMIC CHIP 1MF	16V
C118	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C119	1-163-369-11	CERAMIC CHIP 47PFF	5% 25V
C122	1-163-093-11	CERAMIC CHIP 10PF	5% 50V
C130	1-216-295-00	METAL GLAZE 0	5% 1/10W
C131	1-163-224-11	CERAMIC CHIP 7PF	0.25PF 50V
C133	1-124-477-11	ELECT 47MF	20% 16V
C161	1-164-117-00	CERAMIC CHIP 100PF	5% 50V
C162	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C163	1-164-346-11	CERAMIC CHIP 1MF	16V
C164	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C165	1-164-232-11	CERAMIC CHIP 0.01F	10% 50V
C166	1-124-477-11	ELECT 47MF	20% 16V
C167	1-163-213-00	CERAMIC CHIP 0.0022MF	5% 50V
C168	1-164-346-11	CERAMIC CHIP 1MF	16V
C170	1-124-477-11	ELECT 47MF	20% 16V
C171	1-124-477-11	ELECT 47MF	20% 16V
C173	1-124-477-11	ELECT 47MF	20% 16V
		< FILTER >	
CD1	1-579-657-21	DISCRIMINATOR, CERAMIC	
CF1	1-567-569-11	FILTER, CERAMIC	
SWF1	1-579-659-11	FILTER, SAWTOOTH WAVE	
		< CONNECTOR >	
CN1	1-750-173-11	PIN, CONNECTOR (PC BOARD) 10P	
CN2	1-750-173-11	PIN, CONNECTOR (PC BOARD) 10P	

IF (KV-S3432U)

M2

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
< TRIMMER >				R102	1-216-045-00	METAL GLAZE 680 5%	1/10W
CT1	1-409-333-00	TRAP, CERAMIC (6.0MHZ)		R103	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
< DIODE >				R104	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
D161	8-719-400-18	DIODE MA152WK		R105	1-216-043-00	METAL GLAZE 560 5%	1/10W
< IC >				R106	1-216-049-00	METAL GLAZE 1K 5%	1/10W
IC1	8-759-070-76	IC M52308SP		R107	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
IC3	8-759-514-54	IC BA7046		R108	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
< COIL >				R110	1-216-041-00	METAL GLAZE 470 5%	1/10W
L101	1-408-414-00	INDUCTOR 27UH		R112	1-216-045-00	METAL GLAZE 680 5%	1/10W
L102	1-408-419-00	INDUCTOR 68UH		R113	1-216-031-00	METAL GLAZE 180 5%	1/10W
L103	1-408-419-00	INDUCTOR 68UH		R114	1-216-049-00	METAL GLAZE 1K 5%	1/10W
L104	1-408-406-00	INDUCTOR 5.6UH		R115	1-216-031-00	METAL GLAZE 180 5%	1/10W
L105	1-408-410-00	INDUCTOR 12UH		R116	1-216-101-00	METAL GLAZE 150K 5%	1/10W
L142	1-408-790-41	INDUCTOR 0.56UH		R117	1-216-097-00	METAL GLAZE 100K 5%	1/10W
L161	1-408-419-00	INDUCTOR 68UH		R118	1-216-117-00	METAL GLAZE 680K 5%	1/10W
< TRANSISTOR >				R119	1-216-240-00	METAL GLAZE 56K 5%	1/8W
Q101	8-729-920-74	TRANSISTOR 2SC2412K-QR		R120	1-216-075-00	METAL GLAZE 12K 5%	1/10W
Q102	8-729-216-22	TRANSISTOR 2SA1162-G		R121	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
Q122	8-729-216-22	TRANSISTOR 2SA1162-G		R122	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
Q161	8-729-216-22	TRANSISTOR 2SA1162-G		R123	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
Q172	8-729-920-74	TRANSISTOR 2SC2412K-QR		R130	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q173	8-729-920-74	TRANSISTOR 2SC2412K-QR		R131	1-216-025-00	METAL GLAZE 100 5%	1/10W
< RESISTOR >				R132	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
JR1	1-216-296-00	METAL GLAZE 0 5%	1/8W	R133	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
JR2	1-216-295-00	METAL GLAZE 0 5%	1/10W	R134	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR3	1-216-296-00	METAL GLAZE 0 5%	1/8W	R135	1-216-198-00	METAL GLAZE 1K 5%	1/8W
JR4	1-216-295-00	METAL GLAZE 0 5%	1/10W	R153	1-216-025-00	METAL GLAZE 100 5%	1/10W
JR7	1-216-295-00	METAL GLAZE 0 5%	1/10W	R159	1-216-107-00	METAL GLAZE 270K 5%	1/10W
JR8	1-216-295-00	METAL GLAZE 0 5%	1/10W	R160	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR9	1-216-296-00	METAL GLAZE 0 5%	1/8W	R161	1-216-755-11	METAL CHIP 130K 0.50%	1/10W
JR10	1-216-296-00	METAL GLAZE 0 5%	1/8W	R162	1-216-073-00	METAL GLAZE 10K 5%	1/10W
JR11	1-216-296-00	METAL GLAZE 0 5%	1/8W	R163	1-216-113-00	METAL GLAZE 470K 5%	1/10W
JR12	1-216-296-00	METAL GLAZE 0 5%	1/8W	R164	1-216-113-00	METAL GLAZE 470K 5%	1/10W
JR13	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	R165	1-216-081-00	METAL GLAZE 22K 5%	1/10W
JR14	1-216-296-00	METAL GLAZE 0 5%	1/8W	R166	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR16	1-216-295-00	METAL GLAZE 0 5%	1/10W	R167	1-216-073-00	METAL GLAZE 10K 5%	1/10W
JR18	1-216-295-00	METAL GLAZE 0 5%	1/10W	R168	1-216-113-00	METAL GLAZE 470K 5%	1/10W
JR19	1-216-296-00	METAL GLAZE 0 5%	1/8W	R169	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR20	1-216-296-00	METAL GLAZE 0 5%	1/8W	R175	1-216-083-00	METAL GLAZE 27K 5%	1/10W
JR21	1-216-296-00	METAL GLAZE 0 5%	1/8W	R176	1-216-075-00	METAL GLAZE 12K 5%	1/10W
JR23	1-216-296-00	METAL GLAZE 0 5%	1/8W	R177	1-216-095-00	METAL GLAZE 82K 5%	1/10W
JR24	1-216-296-00	METAL GLAZE 0 5%	1/8W	R178	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
JR25	1-216-296-00	METAL GLAZE 0 5%	1/8W	R179	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
JR29	1-216-296-00	METAL GLAZE 0 5%	1/8W	R181	1-216-037-00	METAL GLAZE 330 5%	1/10W
JR30	1-216-295-00	METAL GLAZE 0 5%	1/10W	< VARIABLE RESISTOR >			
JR33	1-216-295-00	METAL GLAZE 0 5%	1/10W	RV1	1-241-121-11	RES, ADJ, CARBON 4.7K	
JR38	1-216-296-00	METAL GLAZE 0 5%	1/8W	< TRANSFORMER >			
JR39	1-216-296-00	METAL GLAZE 0 5%	1/8W	T4	1-416-017-21	COIL	
JR40	1-216-296-00	METAL GLAZE 0 5%	1/8W	T5	1-416-018-21	COIL	
JR41	1-216-295-00	METAL GLAZE 0 5%	1/10W	*****			
JR42	1-216-295-00	METAL GLAZE 0 5%	1/10W	*A-1635-020-A M2 BOARD, COMPLETE			
JR101	1-216-295-00	METAL GLAZE 0 5%	1/10W	*****			
R101	1-216-075-00	METAL GLAZE 12K 5%	1/10W	< CAPACITOR >			
				C001	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
				C004	1-164-222-11	CERAMIC CHIP 0.22MF	25V
				C007	1-163-117-00	CERAMIC CHIP 100PF	5% 50V

M2

C

The components identified by shading and marked '†' are critical for safety.  
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
R016	1-216-045-00	METAL GLAZE 680 5%	1/10W
R017	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R018	1-216-041-00	METAL GLAZE 470 5%	1/10W
R020	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R021	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R025	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R026	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R027	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R028	1-216-677-11	METAL CHIP 12K 0.50%	1/10W
R030	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R032	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R033	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R034	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R035	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R038	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R049	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R050	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R051	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R052	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R053	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R054	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R055	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R067	1-216-043-00	METAL GLAZE 560 5%	1/10W
R068	1-216-043-00	METAL GLAZE 560 5%	1/10W
R069	1-216-037-00	METAL GLAZE 330 5%	1/10W
R071	1-216-198-91	METAL GLAZE 1K 5%	1/8W
R535	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R536	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R538	1-216-025-00	METAL GLAZE 100 5%	1/10W
R539	1-216-657-11	METAL CHIP 1.8K 0.50%	1/10W
R541	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R542	1-216-025-00	METAL GLAZE 100 5%	1/10W
R544	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R545	1-216-033-00	METAL GLAZE 220 5%	1/10W
R546	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R547	1-216-651-11	METAL CHIP 1K 0.50%	1/10W
R551	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R552	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R553	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R559	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R560	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R564	1-216-091-00	METAL GLAZE 56K 5%	1/10W
R565	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R566	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R567	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R568	1-216-109-00	METAL GLAZE 330K 5%	1/10W
R570	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R2001	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R2002	1-216-043-00	METAL GLAZE 560 5%	1/10W
R2003	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R2004	1-216-037-00	METAL GLAZE 330 5%	1/10W
R2005	1-216-041-00	METAL GLAZE 470 5%	1/10W
R2007	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R2008	1-216-025-00	METAL GLAZE 100 5%	1/10W
R2009	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R2010	1-216-025-00	METAL GLAZE 100 5%	1/10W
R2011	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R2012	1-216-029-00	METAL GLAZE 150 5%	1/10W
R2013	1-216-029-00	METAL GLAZE 150 5%	1/10W
R2014	1-216-029-00	METAL GLAZE 150 5%	1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R2017	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R2018	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R2019	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R2020	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R2021	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R2022	1-216-033-00	METAL GLAZE 220 5%	1/10W
R2023	1-216-025-00	METAL GLAZE 100 5%	1/10W
R2025	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R2026	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R2030	1-216-295-91	METAL GLAZE 0 5%	1/10W
R2032	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R2033	1-216-295-91	METAL GLAZE 0 5%	1/10W
R2036	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R2037	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R2039	1-216-041-00	METAL GLAZE 470 5%	1/10W
R2040	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
< CRYSTAL >			
X2001	1-579-965-21	VIBRATOR, CRYSTAL	
*****			
*A-1638-033-A C BOARD, COMPLETE			
*****			
< CAPACITOR >			
C701	1-162-114-00	CERAMIC 0.0047MF	2KV
C703	1-123-946-00	ELECT 4.7MF	20% 250V
C705	1-162-116-00	CERAMIC 680PF	10% 2KV
C708	1-163-197-00	CERAMIC CHIP 470PF	10% 50V
C709	1-163-005-11	CERAMIC CHIP 470PF	10% 50V
C710	1-163-005-11	CERAMIC CHIP 470PF	10% 50V
C711	1-101-880-00	CERAMIC 47PF	5% 50V
C712	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C713	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C714	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C716	1-124-478-11	ELECT 100MF	20% 25V
< CONNECTOR >			
CN0002	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN0403	1-564-511-11	PLUG, CONNECTOR 8P	
CN0421	1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
< DIODE >			
D701	8-719-901-33	DIODE 1SS133	
D702	8-719-901-33	DIODE 1SS133	
D703	8-719-901-33	DIODE 1SS133	
D704	8-719-901-33	DIODE 1SS133	
D705	8-719-901-33	DIODE 1SS133	
D706	8-719-901-33	DIODE 1SS133	
D707	8-719-901-33	DIODE 1SS133	
D708	8-719-901-33	DIODE 1SS133	
D709	8-719-901-33	DIODE 1SS133	
D710	8-719-901-33	DIODE 1SS133	
D713	8-719-908-03	DIODE GP08D	
< CRT SOCKET >			
J701	1-540-223-11	SOCKET, CRT	

M2

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C008	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	< FILTER >			
C010	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	CD001	1-579-126-11	VIBRATOR, CERAMIC	
C011	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	< CONNECTOR >			
C012	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	CN1413	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P	
C014	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	CN1426	*1-568-881-51	PIN, CONNECTOR 6P	
C016	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	CN1432	*1-568-882-51	PIN, CONNECTOR 7P	
C017	1-164-222-11	CERAMIC CHIP 0.22MF	25V	CN1435	*1-564-508-11	PLUG, CONNECTOR 5P	
C018	1-164-505-11	CERAMIC CHIP 2.2MF	16V	< DIODE >			
C019	1-124-916-11	ELECT 22MF	20% 50V	D001	8-719-027-82	DIODE MA3039H-TX	
C020	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	D2001	8-719-036-58	DIODE MA3030-H(TX)	
C022	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D2003	8-719-914-44	DIODE DAP202K	
C023	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D2007	8-719-914-44	DIODE DAP202K	
C024	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	< IC >			
C025	1-164-222-11	CERAMIC CHIP 0.22MF	25V	IC001	8-759-168-52	IC SDA30C162-GEG	
C026	1-164-222-11	CERAMIC CHIP 0.22MF	25V	IC002	8-759-167-62	IC TMS27PC010A-15FML	
C032	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	IC561	1-750-797-11	SOCKET, PLCC (IC002)	
C035	1-163-033-00	CERAMIC CHIP 0.022MF	50V	IC562	8-752-347-92	IC CXD2018Q	
C036	1-164-005-11	CERAMIC CHIP 0.47MF	25V	IC562	8-759-998-98	IC LM358D	
C037	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	IC563	8-759-708-05	IC NJM78L05A	
C039	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V	IC2002	8-759-262-58	IC SDA5273P-C22-GEG	
C042	1-162-638-11	CERAMIC CHIP 1MF	16V	< COIL >			
C044	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	L001	1-408-421-00	INDUCTOR 100UH	
C522	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	L561	1-408-409-00	INDUCTOR 10UH	
C523	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	L562	1-408-409-00	INDUCTOR 10UH	
C524	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	L563	1-408-947-00	INDUCTOR 2.2MMH	
C525	1-164-222-11	CERAMIC CHIP 0.22MF	25V	L2001	1-410-674-31	INDUCTOR 82UH	
C528	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	< TRANSISTOR >			
C529	1-163-169-00	CERAMIC CHIP 33PF	5% 50V	Q002	8-729-216-22	TRANSISTOR 2SA1162-G	
C541	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	Q003	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C542	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	Q564	8-729-216-22	TRANSISTOR 2SA1162-G	
C543	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	Q565	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C544	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	Q566	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C546	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	Q567	8-729-901-01	TRANSISTOR DTC144EK	
C547	1-163-020-00	CERAMIC CHIP 0.0082MF	10% 50V	Q2001	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C549	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V	Q2002	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C550	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	Q2003	8-729-216-22	TRANSISTOR 2SA1162-G	
C559	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	Q2004	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C560	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	Q2005	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C563	1-163-031-11	CERAMIC CHIP 0.01MF	50V	Q2006	8-729-901-01	TRANSISTOR DTC144EK	
C564	1-163-031-11	CERAMIC CHIP 0.01MF	50V	Q2008	8-729-901-00	TRANSISTOR DTC124EK-T146	
C565	1-163-031-11	CERAMIC CHIP 0.01MF	50V	< RESISTOR >			
C566	1-163-031-11	CERAMIC CHIP 0.01MF	50V	JR553	1-216-295-91	METAL GLAZE 0 5% 1/10W	
C567	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	R001	1-216-025-00	METAL GLAZE 100 5% 1/10W	
C568	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	R002	1-216-025-00	METAL GLAZE 100 5% 1/10W	
C569	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	R003	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
C570	1-162-568-11	CERAMIC CHIP 0.33MF	10% 16V	R004	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
C2001	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	R005	1-216-295-91	METAL GLAZE 0 5% 1/10W	
C2002	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	R007	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
C2004	1-164-222-11	CERAMIC CHIP 0.22MF	25V	R008	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
C2005	1-163-038-00	CERAMIC CHIP 0.1MF	25V	R010	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
C2008	1-164-222-11	CERAMIC CHIP 0.22MF	25V	R011	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
C2016	1-164-222-11	CERAMIC CHIP 0.22MF	25V	R012	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
C2017	1-164-222-11	CERAMIC CHIP 0.22MF	25V	R014	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
C2018	1-164-505-11	CERAMIC CHIP 2.2MF	16V				
C2019	1-124-916-11	ELECT 22MF	20% 50V				
C2020	1-164-222-11	CERAMIC CHIP 0.22MF	25V				
C2021	1-163-113-00	CERAMIC CHIP 68PF	5% 50V				
C2024	1-163-117-00	CERAMIC CHIP 100PF	5% 50V				
C2025	1-163-117-00	CERAMIC CHIP 100PF	5% 50V				
C2027	1-164-222-11	CERAMIC CHIP 0.22MF	25V				

C	D1
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REF.NO.	PART NO.	DESCRIPTION	REMARK
< COIL >			
L701	1-410-667-31	INDUCTOR 22UH	
L703	1-408-609-41	INDUCTOR 33UH	
L705	1-408-609-41	INDUCTOR 33UH	
L707	1-408-609-41	INDUCTOR 33UH	
< TRANSISTOR >			
Q701	8-729-906-70	TRANSISTOR BF871	
Q702	8-729-906-70	TRANSISTOR BF871	
Q703	8-729-906-70	TRANSISTOR BF871	
Q704	8-729-906-70	TRANSISTOR BF871	
Q705	8-729-906-70	TRANSISTOR BF871	
Q706	8-729-906-70	TRANSISTOR BF871	
Q707	8-729-200-17	TRANSISTOR 2SA1091-O	
Q708	8-729-200-17	TRANSISTOR 2SA1091-O	
Q709	8-729-200-17	TRANSISTOR 2SA1091-O	
Q710	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q711	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q712	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q713	8-729-216-22	TRANSISTOR 2SA1162-G	
Q714	8-729-255-12	TRANSISTOR 2SC2551-O	
< RESISTOR >			
JR701	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR703	1-216-296-91	METAL GLAZE 0 5% 1/8W	
R701	1-202-848-00	SOLID 680K 10% 1/2W	
R702	1-202-838-00	SOLID 100K 20% 1/2W	
R703	1-202-815-11	SOLID 47K 20% 1/2W	
R704	1-202-842-11	SOLID 220K 10% 1/2W	
R705	1-216-367-11	METAL OXIDE 0.68 5% 2W F	
R707	1-249-421-11	CARBON 2.2K 5% 1/4W	
R708	1-249-421-11	CARBON 2.2K 5% 1/4W	
R709	1-249-421-11	CARBON 2.2K 5% 1/4W	
R710	1-215-899-11	METAL OXIDE 15K 5% 2W F	
R711	1-202-820-11	SOLID 1.5K 20% 1/2W	
R712	1-215-899-11	METAL OXIDE 15K 5% 2W F	
R713	1-202-820-11	SOLID 1.5K 20% 1/2W	
R714	1-215-899-11	METAL OXIDE 15K 5% 2W F	
R715	1-202-820-11	SOLID 1.5K 20% 1/2W	
R716	1-247-700-11	CARBON 100 5% 1/4W F	
R717	1-249-405-11	CARBON 100 5% 1/4W F	
R718	1-247-700-11	CARBON 100 5% 1/4W F	
R720	1-249-417-11	CARBON 1K 5% 1/4W F	
R722	1-247-713-11	CARBON 1K 5% 1/4W F	
R724	1-249-417-11	CARBON 1K 5% 1/4W F	
R725	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R726	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R727	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R728	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R729	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R730	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R731	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R732	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R733	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R734	1-202-549-00	SOLID 100 20% 1/2W	
R735	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R738	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R739	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R740	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R741	1-216-089-91	METAL GLAZE 47K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R742	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R743	1-249-434-11	CARBON 27K 5% 1/4W	
R747	1-216-489-11	METAL OXIDE 27K 5% 3W F	
R749	1-216-490-11	METAL OXIDE 39K 5% 3W F	
R751	1-215-926-00	METAL OXIDE 33K 5% 3W F	
R753	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R755	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R756	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R757	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R758	1-249-419-11	CARBON 1.5K 5% 1/4W	
R759	1-249-419-11	CARBON 1.5K 5% 1/4W	
R760	1-249-419-11	CARBON 1.5K 5% 1/4W	
< VARIABLE RESISTOR >			
RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	
RV702	1-241-714-11	RES, ADJ, METAL FILM 110M	
*****			
*A-1640-098-A D1 BOARD, COMPLETE			
*****			
4-382-854-11 SCREW (M3X10), P, SW (+)			
< CAPACITOR >			
C1601	1-124-903-11	ELECT 1MF 20% 50V	
C1602	1-136-177-00	FILM 1MF 5% 50V	
C1603	1-130-772-00	FILM 0.22MF 5% 63V	
C1605	1-126-320-11	ELECT 10MF 20% 16V	
C1606	1-124-477-11	ELECT 47MF 20% 25V	
C1607	1-124-902-00	ELECT 0.47MF 20% 50V	
C1608	1-102-112-00	CERAMIC 330PF 10% 50V	
C1610	1-106-391-12	MYLAR 0.1MF 5% 200V	
C1611	1-124-903-11	ELECT 1MF 20% 50V	
C1614	1-137-371-11	FILM 0.015MF 5% 50V	
C1615	1-124-903-11	ELECT 1MF 20% 50V	
C1617	1-129-702-00	FILM 0.001MF 10% 400V	
C1618	1-102-074-00	CERAMIC 0.001MF 10% 50V	
C1620	1-136-601-11	FILM 0.01MF 5% 630V	
C1622	1-124-478-11	ELECT 100MF 20% 25V	
C1623	1-129-702-00	FILM 0.001MF 10% 400V	
C1625	1-126-320-11	ELECT 10MF 20% 16V	
C1626	1-130-777-00	FILM 0.1MF 5% 63V	
C1627	1-136-173-00	FILM 0.47MF 5% 50V	
C1628	1-124-907-11	ELECT 10MF 20% 50V	
C1629	1-136-559-11	FILM 0.0047MF 10% 630V	
C1630	1-102-244-00	CERAMIC 220PF 10% 500V	
C1631	1-124-907-11	ELECT 10MF 20% 50V	
C1633	1-124-907-11	ELECT 10MF 20% 50V	
C1634	1-136-559-11	MYLAR 0.0047MF 10% 400V	
C1635	1-136-205-11	FILM 0.022MF 10% 400V	
C1637	1-129-702-00	FILM 0.001MF 10% 400V	
C1680	1-124-797-11	ELECT 0.47MF 20% 160V	
C1681	1-129-702-00	FILM 0.001MF 10% 630V	
C1684	1-137-366-11	FILM 0.0022MF 5% 50V	
C1690	1-123-947-00	ELECT 10MF 20% 160V	
C1801	1-124-477-11	ELECT 47MF 20% 25V	
C1802	1-124-477-11	ELECT 47MF 20% 25V	
C1803	1-137-370-11	FILM 0.01MF 5% 50V	
C1804	1-137-370-11	FILM 0.01MF 5% 50V	
C1805	1-130-777-00	FILM 0.1MF 5% 63V	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R1627	1-249-415-11	CARBON	680 5% 1/4W	R1821	1-216-379-11	METAL OXIDE	6.8 5% 2W F
R1628	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R1822	1-249-423-11	CARBON	3.3K 5% 1/4W
R1629	1-249-429-11	CARBON	10K 5% 1/4W	R1824	1-249-417-11	CARBON	1K 5% 1/4W F
R1630	1-249-433-11	CARBON	22K 5% 1/4W	R1825	1-215-857-11	METAL OXIDE	10 5% 1W F
R1631	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R1826	1-249-404-00	CARBON	82 5% 1/4W
R1633	1-249-421-11	CARBON	2.2K 5% 1/4W	R1827	1-215-875-11	METAL OXIDE	10K 5% 1W F
R1634	1-216-093-00	METAL GLAZE	68K 5% 1/10W	R1828	1-249-441-11	CARBON	100K 5% 1/4W
R1635	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1829	1-249-414-11	CARBON	560 5% 1/4W
R1636	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1830	1-249-411-11	CARBON	330 5% 1/4W
R1637	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R1831	1-249-426-11	CARBON	5.6K 5% 1/4W
R1638	1-247-807-31	CARBON	100 5% 1/4W	R1832	1-215-864-00	METAL OXIDE	150 5% 1W F
R1639	1-249-405-11	CARBON	100 5% 1/4W F	R1833	1-249-421-11	CARBON	2.2K 5% 1/4W
R1640	1-249-405-11	CARBON	100 5% 1/4W F	R1834	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R1641	1-247-807-31	CARBON	100 5% 1/4W	R1835	1-249-393-11	CARBON	10 5% 1/4W
R1644	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1836	1-249-435-11	CARBON	33K 5% 1/4W
R1645	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R1837	1-249-435-11	CARBON	33K 5% 1/4W
R1646	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R1838	1-216-379-11	METAL OXIDE	6.8 5% 2W F
R1647	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R1839	1-249-410-11	CARBON	270 5% 1/4W
R1648	1-249-435-11	CARBON	33K 5% 1/4W	R1840	1-249-429-11	CARBON	10K 5% 1/4W
R1650	1-249-425-11	CARBON	4.7K 5% 1/4W	R1841	1-249-437-11	CARBON	47K 5% 1/4W
R1652	1-216-025-00	METAL GLAZE	100 5% 1/10W	R1842	1-249-429-11	CARBON	10K 5% 1/4W
R1653	1-216-107-00	METAL GLAZE	270K 5% 1/10W	R1843	1-249-421-11	CARBON	2.2K 5% 1/4W
R1654	1-247-889-00	CARBON	270K 5% 1/4W	R1846	1-249-429-11	CARBON	10K 5% 1/4W
R1655	1-215-876-00	METAL OXIDE	15K 5% 1W F	R1847	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R1656	1-249-413-11	CARBON	470 5% 1/4W	R1848	1-249-429-11	CARBON	10K 5% 1/4W
R1657	1-249-393-11	CARBON	10 5% 1/4W F	R1849	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R1658	1-249-437-11	CARBON	47K 5% 1/4W	R1850	1-249-415-11	CARBON	680 5% 1/4W
R1659	1-216-295-91	METAL GLAZE	0 5% 1/10W	*****			
R1660	1-216-089-91	METAL GLAZE	47K 5% 1/10W	*A-1640-113-A D5 BOARD, COMPLETE			
R1661	1-216-073-00	METAL GLAZE	10K 5% 1/10W	*****			
R1662	1-216-097-00	METAL GLAZE	100K 5% 1/10W	< CAPACITOR >			
R1664	1-249-412-11	CARBON	390 5% 1/4W F	C803	1-164-695-11	CERAMIC CHIP	0.0022MF 5% 50V
R1665	1-215-894-11	METAL OXIDE	2.2K 5% 2W F	C804	1-136-161-00	FILM	0.047MF 5% 50V
R1666	1-215-894-11	METAL OXIDE	2.2K 5% 2W F	C806	1-124-907-11	ELECT	10MF 20% 50V
R1671	1-216-081-00	METAL GLAZE	22K 5% 1/10W	C823	1-124-902-00	ELECT	0.47MF 20% 50V
R1680	1-249-417-11	CARBON	1K 5% 1/4W	C827	1-136-187-11	FILM	0.047MF 5% 63V
R1681	1-249-429-11	CARBON	10K 5% 1/4W	C847	1-164-337-11	CERAMIC CHIP	2.2MF 16V
R1682	1-249-433-11	CARBON	22K 5% 1/4W	C852	1-164-299-11	CERAMIC CHIP	0.22MF 10% 25V
R1683	1-249-411-11	CARBON	330 5% 1/4W	C853	1-124-910-11	ELECT	47MF 20% 50V
R1684	1-249-435-11	CARBON	33K 5% 1/4W	C857	1-124-902-00	ELECT	0.47MF 20% 50V
R1685	1-249-441-11	CARBON	100K 5% 1/4W	C861	1-130-777-00	FILM	0.1MF 5% 63V
R1686	1-249-441-11	CARBON	100K 5% 1/4W	C866	1-137-364-11	FILM	0.001MF 5% 50V
R1687	1-249-441-11	CARBON	100K 5% 1/4W	C870	1-137-364-11	FILM	0.001MF 5% 50V
R1801	1-249-409-11	CARBON	220 5% 1/4W	C871	1-130-651-00	FILM	0.001MF 2% 100V
R1802	1-249-409-11	CARBON	220 5% 1/4W	C872	1-124-907-11	ELECT	10MF 20% 50V
R1804	1-247-891-00	CARBON	330K 5% 1/4W	C873	1-137-364-11	FILM	0.001MF 5% 50V
R1806	1-216-103-91	METAL GLAZE	180K 5% 1/10W	< CONNECTOR >			
R1807	1-247-891-00	CARBON	330K 5% 1/4W	CN2044	*1-573-299-11	CONNECTOR, BOARD TO BOARD	10P
R1808	1-215-461-00	METAL	47K 1% 1/4W	< DIODE >			
R1809	1-249-423-11	CARBON	3.3K 5% 1/4W	D804	8-719-901-33	DIODE 1SS133	
R1810	1-249-413-11	CARBON	470 5% 1/4W	D808	8-719-109-88	DIODE RD5.6ESB1	
R1811	1-216-083-00	METAL GLAZE	27K 5% 1/10W	D818	8-719-109-93	DIODE RD6.2ESB2	
R1812	1-216-091-00	METAL GLAZE	56K 5% 1/10W	D821	8-719-914-44	DIODE DAP202K	
R1813	1-249-417-11	CARBON	1K 5% 1/4W	D827	8-719-982-96	DIODE MTZJ-T-77-2.2A	
R1815	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	D830	8-719-914-44	DIODE DAP202K	
R1816	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	D831	8-719-914-43	DIODE DAN202K	
R1817	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W				
R1818	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R1819	1-216-079-00	METAL GLAZE	18K 5% 1/10W				
R1820	1-249-417-11	CARBON	1K 5% 1/4W				

D5

D2

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D832	8-719-914-44	DIODE DAP202K		< DIODE >			
D833	8-719-914-44	DIODE DAP202K		D1851	8-719-110-31	DIODE RD12ESB2	
< IC >				D1856	8-719-901-33	DIODE 1SS133	
IC802	8-759-103-93	IC UPC393C		D1867	8-719-987-87	DIODE ERA85-009	
< TRANSISTOR >				D1868	8-719-987-87	DIODE ERA85-009	
Q804	8-729-216-22	TRANSISTOR 2SA1162-G		D1882	8-719-109-89	DIODE RD5.6ESB2	
Q805	8-729-216-22	TRANSISTOR 2SA1162-G		D1883	8-719-109-89	DIODE RD5.6ESB2	
Q812	8-729-920-74	TRANSISTOR 2SC2412K-QR		< IC >			
Q818	8-729-216-22	TRANSISTOR 2SA1162-G		IC1851	8-759-708-05	IC NJM78L05A	
< RESISTOR >				IC1852	8-759-135-80	IC UPC358C	
R802	1-216-295-91	METAL GLAZE	0 5% 1/10W	IC1853	8-759-902-21	IC SN74LS221N	
R805	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	< COIL >			
R806	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	L1852	1-459-390-00	COIL (WITH CORE)	
R808	1-216-085-00	METAL GLAZE	33K 5% 1/10W	< TRANSISTOR >			
R809	1-216-097-00	METAL GLAZE	100K 5% 1/10W	Q1851	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R813	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	Q1852	8-729-173-38	TRANSISTOR 2SA733-K	
R814	1-216-091-00	METAL GLAZE	56K 5% 1/10W	Q1853	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R815	1-216-081-00	METAL GLAZE	22K 5% 1/10W	Q1854	8-729-173-38	TRANSISTOR 2SA733-K	
R820	1-216-097-00	METAL GLAZE	100K 5% 1/10W	Q1855	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R824	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	Q1856	8-729-017-05	TRANSISTOR 2SA1837	
R828	1-216-121-00	METAL GLAZE	1M 5% 1/10W	Q1857	8-729-122-03	TRANSISTOR 2SA1220A-P	
R829	1-249-429-11	CARBON	10K 5% 1/4W F	Q1858	8-729-920-92	TRANSISTOR 2SD2096-EF	
R830	1-216-687-11	METAL CHIP	33K 0.50% 1/10W	Q1859	8-729-173-38	TRANSISTOR 2SA733-K	
R832	1-216-682-11	METAL CHIP	20K 0.50% 1/10W	Q1860	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R834	1-218-753-11	METAL CHIP	110K 0.50% 1/10W	Q1861	8-729-017-06	TRANSISTOR 2SC4793	
R835	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	< RESISTOR >			
R837	1-216-695-11	METAL CHIP	68K 0.50% 1/10W	JR1851	1-216-296-91	METAL GLAZE	0 5% 1/8W
R838	1-216-695-11	METAL CHIP	68K 0.50% 1/10W	R1851	1-260-096-11	CARBON	560 5% 1/2W
R846	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W	R1852	1-249-437-11	CARBON	47K 5% 1/4W
R847	1-216-699-11	METAL CHIP	100K 0.50% 1/10W	R1853	1-215-460-00	METAL	43K 1% 1/4W
R867	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R1854	1-249-429-11	CARBON	10K 5% 1/4W
R884	1-216-693-11	METAL CHIP	56K 0.50% 1/10W	R1860	1-249-403-11	CARBON	68 5% 1/4W
*****				R1861	1-249-429-11	CARBON	10K 5% 1/4W
*A-1640-114-A D2 BOARD, COMPLETE				R1862	1-249-418-11	CARBON	1.2K 5% 1/4W
*****				R1863	1-215-473-00	METAL	150K 1% 1/4W
< CAPACITOR >				R1873	1-216-474-11	METAL OXIDE	82 5% 3W F
C1851	1-124-910-11	ELECT	47MF 20% 50V	R1875	1-215-453-00	METAL	22K 1% 1/4W
C1853	1-124-907-11	ELECT	10MF 20% 50V	R1877	1-216-113-00	METAL GLAZE	470K 5% 1/10W
C1854	1-124-910-11	ELECT	47MF 20% 50V	R1878	1-260-089-11	CARBON	150 5% 1/2W
C1855	1-106-367-00	MYLAR	0.01MF 10% 400V	R1879	1-216-296-91	METAL GLAZE	0 5% 1/8W
C1858	1-163-275-11	CERAMIC CHIP	0.001MF 5% 50V	R1881	1-215-867-00	METAL OXIDE	470 5% 1W F
C1859	1-163-275-11	CERAMIC CHIP	0.001MF 5% 50V	R1882	1-215-916-00	METAL OXIDE	680 5% 3W F
C1860	1-137-104-11	FILM	0.033MF 10% 250V	R1889	1-260-098-11	CARBON	820 5% 1/2W
C1861	1-137-104-11	FILM	0.033MF 10% 250V	R1891	1-249-411-11	CARBON	330 5% 1/4W
C1862	1-124-657-00	ELECT	10MF 20% 50V	R1893	1-215-911-11	METAL OXIDE	100 5% 3W F
C1863	1-136-104-00	FILM	0.16MF 5% 200V	R1894	1-249-429-11	CARBON	10K 5% 1/4W
C1866	1-124-119-00	ELECT	330MF 20% 16V	R1895	1-247-895-00	CARBON	470K 5% 1/4W
C1867	1-124-478-11	ELECT	100MF 20% 25V	R1898	1-249-411-11	CARBON	330 5% 1/4W
C1891	1-164-346-11	CERAMIC CHIP	1MF 16V	R1899	1-249-411-11	CARBON	330 5% 1/4W
C1892	1-164-346-11	CERAMIC CHIP	1MF 16V	< VARIABLE RESISTOR >			
< CONNECTOR >				RV1851	1-241-765-11	RES, ADJ, CERMET 22K	
CN1823	*1-573-299-11	CONNECTOR, BOARD TO BOARD 10P		RV1853	1-241-761-11	RES, ADJ, CERMET 1K	

D2

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REF.NO.	PART NO.	DESCRIPTION	REMARK
< TRANSFORMER >			
T1851	1-423-622-11	TRANSFORMER, FERRITE (VPOT)	
*****			
	*A-1642-102-A	D BOARD, COMPLETE	
	*****		
	4-200-001-01	HOLDER, IC	
	4-201-023-01	SPACER, INSULATING	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
	4-812-134-00	RIVET NYLON, 3.5	
	7-682-652-09	SCREW +PSW 3X16	
< CAPACITOR >			
C601	1-130-202-00	FILM 0.022MF	10% 400V
C602	1-162-116-00	CERAMIC 680PF	10% 2KV
C603	1-161-742-00	CERAMIC 0.0022MF	20% 400V
C605	1-124-910-11	ELECT 47MF	20% 50V
C608	1-124-903-11	ELECT 1MF	20% 50V
C611	1-102-002-00	CERAMIC 680PF	10% 500V
C612	1-130-481-00	FILM 0.0068MF	5% 50V
C613	1-129-722-00	FILM 0.047MF	10% 630V
C614	1-102-030-00	CERAMIC 330PF	10% 500V
C615	1-124-962-11	ELECT 2200MF	20% 25V
C616	1-162-115-00	CERAMIC 330PF	10% 1KV
C617	1-162-116-00	CERAMIC 680PF	10% 2KV
C618	1-162-115-00	CERAMIC 330PF	10% 2KV
C619	1-102-030-00	CERAMIC 330PF	10% 500V
C620	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C621	1-124-347-00	ELECT 100MF	20% 160V
C622	1-128-320-11	ELECT 2200MF	20% 16V
C623	1-102-030-00	CERAMIC 330PF	10% 500V
C624	1-126-800-51	ELECT 2200MF	20% 25V
C625	1-126-800-51	ELECT 2200MF	20% 25V
C627	1-136-553-11	FILM 0.0015MF	10% 400V
C628	1-124-910-11	ELECT 47MF	20% 50V
C629	1-124-907-11	ELECT 10MF	20% 50V
C631	1-163-075-00	CERAMIC CHIP 0.047MF	10% 25V
C632	1-137-372-11	FILM 0.022MF	5% 50V
C633	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C636	1-130-777-00	FILM 0.1MF	5% 63V
C640	1-124-916-11	ELECT 22MF	20% 50V
C645	1-128-571-11	ELECT 56MF	20% 50V
C646	1-124-798-11	ELECT 1MF	20% 160V
C647	1-124-907-11	ELECT 10MF	20% 50V
C801	1-137-116-11	FILM 1MF	5% 200V
C805	1-124-902-00	ELECT 0.47MF	20% 50V
C808	1-162-114-00	CERAMIC 0.0047MF	2KV
C809	1-124-808-51	ELECT 10MF	20% 200V
C810	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
C812	1-162-318-11	CERAMIC 0.001MF	10% 500V
C813	1-110-364-11	MYLAR 0.1MF	10% 200V
C815	1-162-117-00	CERAMIC 100PF	10% 500V
C816	1-102-244-00	CERAMIC 220PF	10% 500V
C819	1-126-103-11	ELECT 470MF	20% 16V
C821	1-137-347-11	FILM 0.022MF	3% 2KV
C822	1-162-116-00	CERAMIC 680PF	10% 2KV
C824	1-137-366-11	FILM 0.0022MF	5% 50V
C825	1-162-116-00	CERAMIC 680PF	10% 2KV
C826	1-137-515-11	FILM 0.056MF	3% 400V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C828	1-136-557-11	FILM 0.0033MF	10% 400V
C830	1-136-105-00	FILM 0.33MF	5% 200V
C831	1-123-932-00	ELECT 4.7MF	20% 160V
C832	1-124-910-11	ELECT 47MF	20% 50V
C833	1-136-569-11	FILM 1.2MF	5% 200V
C834	1-137-114-11	FILM 0.68MF	5% 200V
C835	1-124-480-11	ELECT 470MF	20% 25V
C836	1-102-228-00	CERAMIC 470PF	10% 500V
C837	1-129-702-00	FILM 0.001MF	10% 400V
C838	1-110-364-11	MYLAR 0.1MF	10% 200V
C839	1-123-950-00	ELECT 47MF	20% 250V
C840	1-124-480-11	ELECT 470MF	20% 25V
C841	1-102-228-00	CERAMIC 470PF	10% 500V
C842	1-136-208-11	FILM 0.068MF	10% 250V
C843	1-124-907-11	ELECT 10MF	20% 50V
C846	1-123-024-21	ELECT 33MF	160V
C851	1-137-364-11	FILM 0.001MF	5% 50V
C854	1-162-115-00	CERAMIC 330PF	10% 2KV
C863	1-106-383-00	MYLAR 0.047MF	10% 100V
C869	1-130-777-00	FILM 0.1MF	5% 63V
C875	1-102-038-00	CERAMIC 0.001MF	500V
C877	1-124-902-00	ELECT 0.47MF	20% 50V
C878	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C879	1-102-228-00	CERAMIC 470PF	10% 500V
C1501	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C1502	1-124-903-11	ELECT 1MF	20% 50V
C1503	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C1504	1-124-480-11	ELECT 470MF	20% 25V
C1505	1-124-911-11	ELECT 220MF	20% 50V
C1506	1-130-777-00	FILM 0.1MF	5% 63V
C1507	1-137-423-11	MYLAR 0.15MF	10% 100V
C1508	1-124-480-11	ELECT 470MF	20% 25V
C1509	1-124-767-00	ELECT 2.2MF	20% 50V
C1511	1-124-907-11	ELECT 10MF	20% 50V
C1512	1-124-006-11	ELECT 10MF	20% 25V
C1514	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1515	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
< CONNECTOR >			
CN0004	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN0009	1-568-878-51	PIN, CONNECTOR 3P	
CN0504	1-564-511-11	PLUG, CONNECTOR 8P	
CN0505	*1-568-880-51	PIN, CONNECTOR 5P	
CN0506	*1-568-880-51	PIN, CONNECTOR 5P	
CN0519	*1-568-878-51	PIN, CONNECTOR 3P	
CN0521	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CN0522	*1-564-512-11	PLUG, CONNECTOR 9P	
CN0523	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P	
CN0524	*1-568-878-51	PIN, CONNECTOR 3P	
CN0525	*1-695-294-11	PIN, CONNECTOR (PC BOARD) 6P	
CN0526	*1-568-881-51	PIN, CONNECTOR 6P	
CN0529	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
CN0544	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P	
CN5521	*1-568-878-51	PIN, CONNECTOR 3P	
DY1	*1-580-798-11	CONNECTOR PIN (DY) 6P	
< DIODE >			
D601	8-719-914-44	DIODE DAP202K	
D602	8-719-302-43	DIODE EL1Z	
D604	8-719-110-39	DIODE RD15ESB1	

D

The components identified by shading and marked \* are critical for safety.  
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D605	8-719-975-56	DIODE 1SS120A		L812	1-412-531-31	INDUCTOR 33UH	
D606	8-719-302-43	DIODE EL1Z		L813	1-412-519-11	INDUCTOR 3.3UH	
D607	8-719-302-43	DIODE EL1Z		L817	1-423-374-11	TRANSFORMER, LINEARITY (HLT)	
D608	8-719-300-33	DIODE RU-3AM		L1501	1-412-525-21	INDUCTOR 10UH	
D609	8-719-029-04	DIODE D5L60		L1502	1-412-525-21	INDUCTOR 10UH	
D610	8-719-970-39	DIODE ESAC92M-02		L1503	1-412-525-21	INDUCTOR 10UH	
D611	8-719-029-04	DIODE D5L60		< IC LINK >			
D612	8-719-510-09	DIODE D10SC6M		PS601	* 1-532-686-21	LINK, IC 2.7A (ICP-F75)	
D613	8-719-920-68	DIODE ESAB92-02		PS602	* 1-532-686-21	LINK, IC 2.7A (ICP-F75)	
D614	8-719-920-68	DIODE ESAB92-02		PS603	* 1-532-686-21	LINK, IC 2.7A (ICP-F75)	
D616	8-719-110-31	DIODE RD12ESB2		PS604	* 1-532-686-21	LINK, IC 2.7A (ICP-F75)	
D619	8-719-914-43	DIODE DAN202K		< TRANSISTOR >			
D620	8-719-901-33	DIODE 1SS133		Q601	8-729-016-14	TRANSISTOR BUZ91A-E3155	
D621	8-719-302-43	DIODE EL1Z		Q602	8-729-177-22	TRANSISTOR 2SB772-Q	
D624	8-719-312-39	DIODE R2K-V1		Q603	8-729-900-53	TRANSISTOR DTC114EK	
D801	8-719-018-82	DIODE RGP02-20EL-6394		Q604	8-729-209-15	TRANSISTOR 2SD2012	
D802	8-719-302-43	DIODE EL1Z		Q605	8-729-255-12	TRANSISTOR 2SC2551-O	
D803	8-719-982-27	DIODE MTZJ-33C		Q606	8-729-216-22	TRANSISTOR 2SA1162-G	
D809	8-719-110-03	DIODE RD7.5ESB2		Q611	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D811	8-719-300-33	DIODE RU-3AM		Q612	8-729-903-29	TRANSISTOR DTA144TK	
D812	8-719-908-03	DIODE GP08D		Q613	8-729-216-22	TRANSISTOR 2SA1162-G	
D813	8-719-908-03	DIODE GP08D		Q801	8-729-016-32	TRANSISTOR 2SC4927-01	
D814	8-719-028-29	DIODE RU30ALFS1		Q802	8-729-140-97	TRANSISTOR 2SB734-34	
D815	8-719-302-43	DIODE EL1Z		Q806	8-729-019-71	TRANSISTOR 2SK1916-53-F50	
D816	8-719-979-85	DIODE RGP20G		Q807	8-729-119-80	TRANSISTOR 2SC2688-LK	
D822	8-719-982-20	DIODE MTZJ-30B		Q813	8-729-140-96	TRANSISTOR 2SD774-34	
D824	8-719-028-72	DIODE RGP02-17EL-6433		Q1501	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D825	8-719-914-43	DIODE DAN202K		Q1502	8-729-901-01	TRANSISTOR DTC144EK	
D826	8-719-914-43	DIODE DAN202K		Q1503	8-729-216-22	TRANSISTOR 2SA1162-G	
D828	8-719-901-33	DIODE 1SS133		Q1504	8-729-901-01	TRANSISTOR DTC144EK	
D1501	8-719-914-43	DIODE DAN202K		< RESISTOR >			
D1503	8-719-908-03	DIODE GP08D		R602	1-216-081-00	METAL GLAZE 22K 5%	1/10W
D1504	8-719-982-03	DIODE MTZJ-3.6A		R603	1-215-901-00	METAL OXIDE 33K 5%	2W F
< IC >				R604	1-260-200-11	CARBON 240K 5%	1/2W
IC601	8-759-073-29	IC TDA4605-3		R605	1-216-295-91	METAL GLAZE 0 5%	1/10W
IC602	8-759-908-15	IC TL431CLP		R606	1-216-035-00	METAL GLAZE 270 5%	1/10W
IC603	* 8-749-923-44	IC SPH617G-1		R607	1-216-210-00	METAL GLAZE 3.3K 5%	1/8W
IC801	8-759-103-93	IC UPC393C		R608	1-215-903-11	METAL OXIDE 68K 5%	2W F
IC803	8-759-081-31	IC MC78L12ACPRP		R609	1-249-395-11	CARBON 15 5%	1/4W
IC1501	8-759-192-71	IC STV9379		R610	1-247-881-00	CARBON 120K 5%	1/4W
< COIL >				R611	1-215-887-00	METAL OXIDE 150 5%	2W F
L602	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		R612	1-260-131-11	CARBON 470K 5%	1/2W
L603	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		R613	1-216-259-00	METAL GLAZE 360K 5%	1/8W
L604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		R614	1-216-488-11	METAL OXIDE 18K 5%	3W F
L605	1-412-528-11	INDUCTOR 18UH		R615	1-216-488-11	METAL OXIDE 18K 5%	3W F
L606	1-412-528-11	INDUCTOR 18UH		R617	1-216-033-00	METAL GLAZE 220 5%	1/10W
L610	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		R618	1-216-449-11	METAL OXIDE 56 5%	2W F
L622	1-412-533-21	INDUCTOR 47UH		R620	1-216-045-00	METAL GLAZE 680 5%	1/10W
L623	1-412-533-21	INDUCTOR 47UH		R621	1-216-659-11	METAL CHIP 2.2K 0.50%	1/10W
L802	1-408-947-00	INDUCTOR 2.2MMH		R622	1-216-041-00	METAL GLAZE 470 5%	1/10W
L803	1-420-872-00	COIL, AIR CORE		R623	1-216-073-00	METAL GLAZE 10K 5%	1/10W
L804	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		R625	1-216-449-11	METAL OXIDE 56 5%	2W F
L807	1-459-483-00	COIL (WITH CORE)		R626	1-216-635-11	METAL CHIP 220 0.50%	1/10W
L808	1-421-541-00	COIL, CHOKE 1000UH		R627	1-249-398-11	CARBON 27 5%	1/4W F
L809	1-459-104-00	COIL, WITH CORE		R629	1-215-464-00	METAL 62K 1%	1/4W
L810	1-460-197-21	COIL, FERRITE (PMC)		R630	1-249-421-11	CARBON 2.2K 5%	1/4W
L811	1-412-519-11	INDUCTOR 3.3UH		R631	1-216-398-11	METAL OXIDE 5.6 5%	3W F

The components identified by shading and marked † are critical for safety.  
Replace only with the part number specified.

**D** **H1**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R633	1-249-415-11	CARBON	680 5% 1/4W	R898	1-216-262-00	METAL GLAZE	470K 5% 1/8W
R634	1-215-477-00	METAL	220K 1% 1/4W	R1501	1-216-674-11	METAL CHIP	9.1K 0.50% 1/10W
R635	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1502	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
R636	1-215-925-11	METAL OXIDE	22K 5% 3W F	R1503	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R637	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R1504	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R638	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1505	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R639	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R1506	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R640	1-217-192-21	WIREWOUND	0.22 10% 2W F	R1508	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R642	1-216-374-00	METAL OXIDE	2.7 5% 2W F	R1509	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R643	1-249-417-11	CARBON	1K 5% 1/4W	R1510	1-249-382-11	CARBON	1.2 5% 1/4W F
R645	1-215-464-00	METAL	62K 1% 1/4W	R1511	1-215-888-00	METAL OXIDE	220 5% 2W F
R646	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R1512	1-216-370-11	METAL OXIDE	1.2 5% 2W F
R647	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R1514	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R648	1-249-424-11	CARBON	3.9K 5% 1/4W	R1550	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R649	1-216-270-00	METAL GLAZE	1M 5% 1/8W	R1551	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R650	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R1552	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R651	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	< VARIABLE RESISTOR >			
R652	1-216-109-00	METAL GLAZE	330K 5% 1/10W	RV601	1-241-628-11	RES, ADJ, CARBON 2.2K	
R653	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	< TRANSFORMER >			
R654	1-215-904-11	METAL OXIDE	100K 5% 2W F	T601 †	1-423-738-11	S.R.T (SMT89)	
R655	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	T801 †	1-439-524-11	TRANSFORMER ASSY, FLYBACK (NX-3000A2)	
R656	1-216-033-00	METAL GLAZE	220 5% 1/10W	T803	1-437-090-00	HDT	
R657	1-247-811-31	CARBON	150 5% 1/4W	T804	1-424-584-11	TRANSFORMER, DYNAMIC FOCUS	
R801	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	*****			
R804	1-217-778-11	FUSIBLE	1K 5% 1W F	*1-648-314-11	H1 BOARD		
R807	1-216-037-00	METAL GLAZE	330 5% 1/10W	*****			
R811	1-216-033-00	METAL GLAZE	220 5% 1/10W	< SOCKET >			
R812	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	J81	1-568-678-11	TERMINAL BLOCK, S 3P	
R818	1-216-685-11	METAL CHIP	27K 0.50% 1/10W	J82	1-562-837-11	JACK	
R819	1-247-755-11	CARBON	1.8K 5% 1/2W F	< CAPACITOR >			
R821	1-215-918-00	METAL OXIDE	1.5K 5% 3W F	C083	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
R822	1-215-918-00	METAL OXIDE	1.5K 5% 3W F	C087	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
R823	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	< CONNECTOR >			
R826	1-216-166-00	METAL GLAZE	47 5% 1/8W	CN1008	*1-564-513-11	PLUG, CONNECTOR 10P	
R833	1-216-105-00	METAL GLAZE	220K 5% 1/10W	CN1018	*1-568-878-51	PIN, CONNECTOR 3P	
R836	1-216-242-91	METAL GLAZE	68K 5% 1/8W	< COIL >			
R839	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	L081	1-408-409-00	INDUCTOR	10UH
R840	1-216-097-00	METAL GLAZE	100K 5% 1/10W	L082	1-408-409-00	INDUCTOR	10UH
R841	1-249-397-11	CARBON	22 5% 1/4W F	< RESISTOR >			
R842	1-216-454-11	METAL OXIDE	390 5% 2W F	JR021	1-216-295-91	METAL GLAZE	0 5% 1/10W
R848	1-215-885-00	METAL OXIDE	68 5% 2W F	R081	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R849	1-215-881-11	METAL OXIDE	15 5% 2W F	R082	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R851	1-247-743-11	CARBON	220 5% 1/2W F	R083	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R852	1-249-389-11	CARBON	4.7 5% 1/4W F	R084	1-216-202-00	METAL GLAZE	1.5K 5% 1/8W
R853	1-249-443-11	CARBON	0.47 5% 1/4W F	R085	1-216-202-00	METAL GLAZE	1.5K 5% 1/8W
R854	1-249-377-11	CARBON	0.47 5% 1/4W F	< SWITCH >			
R855	1-202-826-00	SOLID	4.7K 20% 1/2W	S081	1-571-532-21	SWITCH, TACTIL	
R858	1-249-423-11	CARBON	3.3K 5% 1/4W	S082	1-571-532-21	SWITCH, TACTIL	
R864	1-216-686-11	METAL CHIP	30K 0.50% 1/10W	S083	1-571-532-21	SWITCH, TACTIL	
R868	1-249-428-11	CARBON	8.2K 5% 1/4W				
R871	1-249-493-11	CARBON	56K 5% 1/2W				
R872	1-249-393-11	CARBON	10 5% 1/4W F				
R873	1-249-393-11	CARBON	10 5% 1/4W F				
R876	1-249-421-11	CARBON	2.2K 5% 1/4W				
R877	1-215-907-11	METAL OXIDE	22 5% 3W F				
R889	1-216-089-91	METAL GLAZE	47K 5% 1/10W				
R893	1-215-878-00	METAL OXIDE	33K 5% 1W F				
R894	1-216-264-00	METAL GLAZE	560K 5% 1/8W				
R895	1-216-095-00	METAL GLAZE	82K 5% 1/10W				
R897	1-216-089-91	METAL GLAZE	47K 5% 1/10W				

H2	J
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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-648-475-11	H2 BOARD *****		C920	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
				C921	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
	*4-201-076-01	HOLDER, LED		C922	1-124-477-11	ELECT 47MF	20% 16V
	*4-374-987-01	GUIDE, LIGHT		C923	1-164-346-11	CERAMIC CHIP 1MF	16V
	4-381-686-01	BRACKET (B), LIGHT GUIDE		C924	1-124-477-11	ELECT 47MF	20% 16V
	< CAPACITOR >			C925	1-124-477-11	ELECT 47MF	20% 16V
C161	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C926	1-164-346-11	CERAMIC CHIP 1MF	16V
C162	1-162-638-11	CERAMIC CHIP 1MF	16V	C927	1-124-477-11	ELECT 47MF	20% 16V
C163	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V	C928	1-124-477-11	ELECT 47MF	20% 16V
C164	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V	C929	1-124-477-11	ELECT 47MF	20% 16V
C165	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C930	1-124-477-11	ELECT 47MF	20% 16V
C166	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C931	1-164-346-11	CERAMIC CHIP 1MF	16V
	< CONNECTOR >			C932	1-164-346-11	CERAMIC CHIP 1MF	16V
CN1132	*1-568-882-51	PIN, CONNECTOR 7P		C933	1-124-477-11	ELECT 47MF	20% 16V
	< DIODE >			C934	1-124-477-11	ELECT 47MF	20% 16V
D092	8-719-948-31	DIODE LD-201VR		C935	1-124-477-11	ELECT 47MF	20% 16V
D093	8-719-948-31	DIODE LD-201VR		C936	1-164-346-11	CERAMIC CHIP 1MF	16V
D094	8-719-948-31	DIODE LD-201VR		C937	1-164-346-11	CERAMIC CHIP 1MF	16V
	< IC >			C938	1-124-477-11	ELECT 47MF	20% 16V
IC091	8-741-101-75	IC SBX1610-11			< CONNECTOR >		
	< RESISTOR >			CN1209	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P	
R091	1-216-190-00	METAL GLAZE 470 5% 1/8W		CN1210	*1-564-522-11	PLUG, CONNECTOR 7P	
*****				CN1233	*1-564-518-11	PLUG, CONNECTOR 3P	
	*A-1651-054-A	J BOARD, COMPLETE *****		CN1240	*1-564-518-11	PLUG, CONNECTOR 3P	
	< CAPACITOR >				< DIODE >		
C281	1-124-119-00	ELECT 330MF	20% 16V	D901	8-719-921-69	DIODE MTZJ-9.1	
C291	1-101-005-00	CERAMIC 0.022MF	50V	D902	8-719-921-69	DIODE MTZJ-9.1	
C292	1-101-005-00	CERAMIC 0.022MF	50V	D903	8-719-921-69	DIODE MTZJ-9.1	
C293	1-101-003-00	CERAMIC 0.0047MF	50V	D904	8-719-921-69	DIODE MTZJ-9.1	
C294	1-101-003-00	CERAMIC 0.0047MF	50V	D905	8-719-921-69	DIODE MTZJ-9.1	
C295	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	D906	8-719-921-69	DIODE MTZJ-9.1	
C296	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	D907	8-719-921-69	DIODE MTZJ-9.1	
C901	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D908	8-719-921-69	DIODE MTZJ-9.1	
C902	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D909	8-719-921-69	DIODE MTZJ-9.1	
C904	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D910	8-719-921-69	DIODE MTZJ-9.1	
C905	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D911	8-719-921-69	DIODE MTZJ-9.1	
C906	1-101-004-00	CERAMIC 0.01MF	50V	D912	8-719-921-69	DIODE MTZJ-9.1	
C907	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D913	8-719-921-69	DIODE MTZJ-9.1	
C908	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D914	8-719-921-69	DIODE MTZJ-9.1	
C909	1-101-004-00	CERAMIC 0.01MF	50V	D915	8-719-921-69	DIODE MTZJ-9.1	
C910	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D916	8-719-921-69	DIODE MTZJ-9.1	
C911	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D917	8-719-921-69	DIODE MTZJ-9.1	
C912	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D918	8-719-921-69	DIODE MTZJ-9.1	
C913	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D919	8-719-921-69	DIODE MTZJ-9.1	
C914	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	D920	8-719-921-69	DIODE MTZJ-9.1	
C915	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	D921	8-719-921-69	DIODE MTZJ-9.1	
C916	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D922	8-719-921-69	DIODE MTZJ-9.1	
C917	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D923	8-719-921-69	DIODE MTZJ-9.1	
C918	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D924	8-719-921-69	DIODE MTZJ-9.1	
C919	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D925	8-719-921-69	DIODE MTZJ-9.1	
	< SOCKET >			D926	8-719-921-69	DIODE MTZJ-9.1	
				D927	8-719-921-69	DIODE MTZJ-9.1	
				D928	8-719-921-69	DIODE MTZJ-9.1	
				D999	8-719-110-39	DIODE RD15ESB1	
				J291	1-536-996-21	TERMINAL BOARD, INPUT/OUTPUT	
				J901	1-695-296-11	TERMINAL BLOCK, S	
				J903	1-561-534-41	SOCKET, PIN 21P	

J

The components identified by shading and marked \* are critical for safety.  
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R973	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W				
R974	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W				
R975	1-216-113-00	METAL GLAZE 470K 5%	1/10W				
R976	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W				
R977	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W				
*****							
MISCELLANEOUS							
*****							
	1-504-145-11	SPEAKER (12CM)					
	1-504-121-21	SPEAKER (SQUAWKER) (5CM)					
A	1-452-616-11	NECK ASSY, PICTURE TUBE (NA323)					
A	1-406-701-11	COIL, DEMAGNETIZATION					
A	1-406-702-11	COIL, DEMAGNETIZATION					
A	8-451-393-12	DEFLECTION YOLK (Y34EXA)					
A	1-751-680-11	CORD, POWER (WITH NOIZE FILTER) (KV-S3431A/S3431D/S3433E/S3431K)					
A	1-590-460-11	CORD, POWER (WITH CONNECTOR) (KV-S3431B)					
A	1-590-762-11	CORD, POWER (WITH PLUG) (KV-S3432U)					
	1-452-032-00	MAGNET, DISC; 10MM					
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM					
V901 A	8-733-731-05	PICTURE TUBE (M81KVA10X)					
*****							
ACCESSORIES AND PACKING MATERIALS							
*****							
	4-202-137-01	DOOR, REAR					
	4-202-739-11	MANUAL, INSTRUCTION (KV-S3431D)					
	4-202-739-41	MANUAL, INSTRUCTION (KV-S3431A)					
	4-202-739-51	MANUAL, INSTRUCTION (KV-S3431B)					
	4-202-739-61	MANUAL, INSTRUCTION (KV-S3432U)					
	4-202-739-71	MANUAL, INSTRUCTION (KV-S3433E)					
	4-202-739-91	MANUAL, INSTRUCTION (KV-S3431K)					
	4-202-271-01	CUSHION (UPPER) (ASSY)					
	4-202-272-01	CUSHION (LOWER) (ASSY)					
	2-202-273-01	TRAY					
	4-202-274-01	INDIVIDUAL CARTON					
REMOTE COMMANDER							
*****							
	1-467-272-11	REMOTE COMMANDER RM-831					
	1-466-854-41	REMOTE COMMANDER RM-860					
*****							



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REF.NO.	PART NO.	DESCRIPTION	REMARK		
J903	1-695-550-11	SOCKET 21P			
J904	1-695-296-11	TERMINAL BLOCK, S			
J905	1-695-293-11	SOCKET 21P			
J906	1-695-296-11	TERMINAL BLOCK, S			
J907	1-695-293-11	SOCKET 21P			
< COIL >					
L281	1-402-711-11	INDUCTOR, WIDEBAND			
L283	1-402-711-11	INDUCTOR, WIDEBAND			
L291	1-402-711-11	INDUCTOR, WIDEBAND			
L292	1-402-711-11	INDUCTOR, WIDEBAND			
< TRANSISTOR >					
Q281	8-729-920-74	TRANSISTOR 2SC2412K-QR			
Q282	8-729-920-74	TRANSISTOR 2SC2412K-QR			
< RESISTOR >					
JR901	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR905	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR906	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR909	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR910	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR911	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR915	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR917	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR918	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR919	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR920	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR921	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR923	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR924	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR926	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR927	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR928	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR935	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR939	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR940	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR942	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR944	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR946	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR947	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR952	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR954	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR955	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR956	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR957	1-216-295-91	METAL GLAZE	0	5%	1/10W
R283	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R284	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R287	1-216-216-00	METAL GLAZE	5.6K	5%	1/8W
R288	1-216-216-00	METAL GLAZE	5.6K	5%	1/8W
R289	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R291	1-249-413-11	CARBON	470	5%	1/4W
R292	1-249-413-11	CARBON	470	5%	1/4W
R901	1-216-039-00	METAL GLAZE	390	5%	1/10W
R902	1-216-039-00	METAL GLAZE	390	5%	1/10W
R903	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R904	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R905	1-216-188-00	METAL GLAZE	390	5%	1/8W
R906	1-216-039-00	METAL GLAZE	390	5%	1/10W
R907	1-216-029-00	METAL GLAZE	150	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK		
R908	1-216-029-00	METAL GLAZE	150	5%	1/10W
R909	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R910	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R911	1-216-022-00	METAL GLAZE	75	5%	1/10W
R913	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R914	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R915	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R916	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R917	1-216-022-00	METAL GLAZE	75	5%	1/10W
R919	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R920	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R921	1-216-022-00	METAL GLAZE	75	5%	1/10W
R922	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R923	1-216-039-00	METAL GLAZE	390	5%	1/10W
R924	1-216-039-00	METAL GLAZE	390	5%	1/10W
R925	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R926	1-216-039-00	METAL GLAZE	390	5%	1/10W
R927	1-216-039-00	METAL GLAZE	390	5%	1/10W
R928	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R929	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R930	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R931	1-216-212-00	METAL GLAZE	3.9K	5%	1/8W
R932	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R933	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R934	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R935	1-216-022-00	METAL GLAZE	75	5%	1/10W
R936	1-216-022-00	METAL GLAZE	75	5%	1/10W
R937	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R938	1-216-039-00	METAL GLAZE	390	5%	1/10W
R939	1-216-188-00	METAL GLAZE	390	5%	1/8W
R940	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R941	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R942	1-216-188-00	METAL GLAZE	390	5%	1/8W
R943	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R944	1-216-188-00	METAL GLAZE	390	5%	1/8W
R945	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R946	1-216-022-00	METAL GLAZE	75	5%	1/10W
R947	1-216-029-00	METAL GLAZE	150	5%	1/10W
R948	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R949	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R950	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R951	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R952	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R953	1-216-188-00	METAL GLAZE	390	5%	1/8W
R954	1-216-039-00	METAL GLAZE	390	5%	1/10W
R955	1-216-039-00	METAL GLAZE	390	5%	1/10W
R956	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R957	1-216-039-00	METAL GLAZE	390	5%	1/10W
R958	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R959	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W
R960	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W
R961	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W
R965	1-216-029-00	METAL GLAZE	150	5%	1/10W
R966	1-216-029-00	METAL GLAZE	150	5%	1/10W
R967	1-216-029-00	METAL GLAZE	150	5%	1/10W
R968	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R969	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R970	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R971	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R972	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W